

FACTSHEET

QUEEN CONCH



SPECIES

Largest of 6 conch in the Caribbean region

SIZE

Up to 30 cm (12 in),
3 kg (~6.5 lb)

HABITAT

Seagrass, sand, coral rubble
Depth: 1-30 m (3-100 ft)

TAXONOMY

Phylum: Mollusca

Species: *Strombus gigas*

LIFE SPAN

Avg. 20-30 years, up to 40 years

GEOGRAPHIC DISTRIBUTION

Tropical regions of the Atlantic, Caribbean, and Gulf of Mexico



DESCRIPTION

Soft-bodied marine invertebrates that secrete pink/orange spiked hard calcareous shells. Distinct flared lip indicates sexually maturity. Possess a single foot with a claw-like tip (operculum), a tube-shaped mouth, and 2 eye stalks.



BEHAVIOR

Slow moving, aggregates in shallow waters making them vulnerable to exploitation. Adults may move 50-100 meters per day. Typically move from shallow to deeper water as they grow.



REPRODUCTION

Form spawning aggregations (dense groupings) generally from mid-March to November. Females lay strings of up to 450,000 eggs. Reach adulthood and full length in 3-5 years, after which they grow wider and develop thicker lip.



DIET

Herbivores: seagrass, algae, seaweed, and particulate organic matter.



PREDATORS

Crabs, spiny lobster, sharks, rays, sea turtles, and several species of fish.



MAIN THREATS

- Overfishing is the greatest threat (listed under CITES - Appendix II)
- Loss of habitat (including poor water quality from pollution)
- Fishing: illegal, unreported, and unregulated (IUU)
- Lack of management resources

SPECIES IMPORTANCE

ECOLOGICAL VALUE

Conch play a vital role in shaping small invertebrate communities. Loss of conch significantly alters critical seagrass habitat, negatively affecting ecologically and economically important fisheries (e.g., lobster).

SOCIOECONOMIC VALUE

- + **Fisheries:** one of the Caribbean's most valuable
- + **Exports:** US \$60 million in annual trade
- + **Livelihoods:** consumption, employment, and local sales
- + **Tradition:** high cultural and historical significance



SOLUTIONS

- ✓ **Ecosystem-based management:** catch and lip thickness limits
- ✓ **Establish no-take marine reserves** (that include critical spawning sites, nearshore nursery grounds, & seagrass beds)
- ✓ **Increase stakeholder involvement**
- ✓ **Improve management capacity:** monitoring, enforcement, & data collection
- ✓ **Explore alternative livelihoods for fishers**



The queen conch is one of the most valuable fisheries species throughout the Caribbean."

Dr. Megan Davis



KEY WEBSITES

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO) | Caribbean Queen Conch

www.fao.org/docrep/006/y5261e/y5261e07

COMMUNITY CONCH

www.communityconch.org

ARKIVE | Queen Conch

www.arkive.org/queen-conch/strombus-gigas/image-G113356.html

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) FISHERIES | Queen Conch

www.marinesciencetoday.com/2014/02/26/what-do-parrotfish-and-conservationists-have-in-common/



VIDEO

FAU HARBOR BRANCH OCEANOGRAPHIC INSTITUTE | The Story of Conch

www.youtube.com/watch?v=f5yGztU0ZaY

CONCH SALAD TV | Ain't Got No More Lip

www.youtube.com/watch?v=-MZWHshQMIO

MICRODOCS | Life Cycle of the Conch

www.youtube.com/watch?v=0F1LcufYwMw

WATERWAYS EPISODE 209 | Queen Conch and Gulf Pipefish

www.youtube.com/watch?v=gPGrPdeFq_w



EXPERTS

RICHARD S. APPELDOORN, PH.D.

Department of Marine Sciences
University of Puerto Rico

MEGAN DAVIS, PH.D.

Interim Executive Director, Research Professor
Florida Atlantic University

ROBERT GLAZER

Associate Research Scientist, Florida Fish and Wildlife Conservation Commission

ALLAN W. STONER, PH.D.

Senior Scientist, Community Conch

ALEXANDER TEWFIK, PH.D.

Marine Conservation Scientist,
Wildlife Conservation Society



REFERENCES

- Appeldoorn, RS. 1988b. Age determination, growth, mortality and age of first reproduction in adult queen conch, *Strombus gigas* L., off Puerto Rico. *Fish Research*. 6: 363-378.
- Brownell, W. N., and J. M. Stevely. 1981. The Biology, Fisheries, and Management of the Queen Conch, *Strombus gigas*. *Marine Fisheries Review*, 43(7), 1-12.
- CITES (Convention on International Trade in Endangered Species). 2003a. Progress on the implementation of the review of significant trade (phases IV and V). Report to the nineteenth meeting of the CITES Animals Committee. AC19 Doc. 8.3. www.cites.org/eng/com/ac/19/E19-08-3.pdf
- Chakalall, B. and K.L. Cochrane. 1997. The queen conch fishery in the Caribbean – An approach to responsible fisheries management. *Proceedings of the Gulf and Caribbean Fisheries Institute* 49: 531-554.
- Davis, M. 2010. Species profiles: queen conch, *Strombus gigas*. SRAC Publication. no. 7203. <https://srac.tamu.edu/index.cfm/event/getFactSheet/whichfactsheet/186/>
- Fanning, L., R. Mahon, P. McConney. and Centre for Maritime Research. 2011. Towards marine ecosystem-based management in the wider Caribbean. Amsterdam: Amsterdam University Press. detritivores of coral reefs: The parrotfishes and surgeonfishes. *PLoS ONE* 7(7):e39825.
- Georges, J., R. Ramdeen, and H.A. Oxenford. 2010. Fishing and marketing of queen conch (*Strombus gigas*) in Tobago. CERMES Technical Report No. 23, 55 pp.
- Horsford, I.S. 2004. Status of the Conch Fishery of Antigua-Barbuda. Fisheries Division. *The Daily Observer*, Vol.11. No.260. http://www.crfm.net/~uwohxjxf/images/Status_of_the_Conch_Fishery_of_Antigua_-_Barbuda.pdf
- Stoner, A.W., M. Ray, and J.M. Waite. 1995. Effects of a large herbivorous gastropod on macrofauna communities in tropical seagrass meadows. *Marine Ecology Progress Series* 121: 125-137.
- Stoner, A.W. and Ray-Culp, M. 2000. Evidence for Allee effect in an over-harvested marine gastropod: density-dependent mating and egg production. *Mar. Ecol.Prog.Ser.*202:297-302.

Updated: January 2015

RELATED FACTSHEETS



Seagrass, Overfishing, Lobster, Blue Economy, Sustainable Seafood

Available: WaittInstitute.org/factsheets