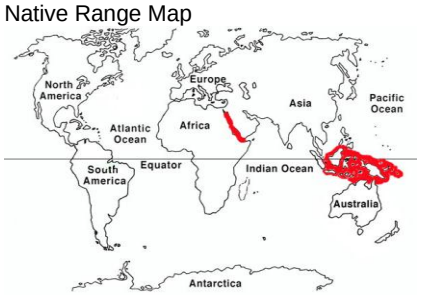
Native Range Map



Open Brain Coral

Kingdom: Animalia
Phylum: Cnidaria
Class: Anthozoa
Order: Scleractinia
Family: Trachyphylliidae
Genus*: Trachyphyllia*
Species*: geoffroyi*

Photo courtesy of Karen Marzynski

Habitat

- **In the Wild:** Brain coral are found on sandy, silty ocean floors in warm shallow water. They live in the Indo-Pacific regions including the Red Sea, Australian archipelago and Indonesia.
- **Exhibit Location:** USS Antiquities (Reef Tank)

Characteristics

- Open Brain Coral are composed of colonies of genetically identical polyps. Polyps secrete calcium carbonate to create an exoskeleton that protects the body of the polyp.
- Fluorescent colors of pink, red, brown, tan, grey, green and blue make them good for aquariums.
- They grow to about 8 inches in marine aquariums.
- The coral can have up to 3 mouths that are about 3 inches across. Septa or "teeth" form on the inside of the coral wall where they form a ridge. The base is usually cone-shaped.
- The entire animal resembles the cortex (outer part) of a primate's brain, hence the name.
- **Lifespan: In the Wild** Unknown; **In Captivity** Many years

Behaviors

- Open Brain Corals are non-aggressive toward other marine aquarium invertebrates.
- They get their nutrition through photosynthesis by zooxanthellae, photosynthetic algae that live symbiotically within the coral.
- When young, this coral usually attaches to a stone or the back of a bivalve (a mollusk having 2 shells hinged together). A mature coral lives by itself on the floor of the reef base and in seagrass beds.
- The ridges of the coral can protect fish, although some fish are predators.
- Brain coral has short tentacles that are extended for feeding at night.
- **Enrichments at the Zoo:** none

Reproduction

- Open Brain Coral reproduces asexually by splitting naturally, producing buds.
- They may reproduce sexually by releasing sperm and eggs at the same time resulting in a fertilized egg, which then forms into a free-swimming larva. The larva settles on the sand and then forms a polyp which develops into the coral by excreting calcium carbonate. As a larva, they are vulnerable to predators such as fish.

Diet

- **In the Wild:** plankton, dissolved organic matter, shellfish, raw fish, Silver Sides, zooplankton, crustaceans
- **At the Zoo:** brine shrimp larvae

Researched and written by the Friends of the Rosamond Gifford Zoo Education Volunteers

Conservation Status

- **IUCN status**: Near Threatened; **CITES** Appendix**:** not listed
- Open brain coral is threatened because of warming waters near the reefs due to global issues. Humans diving in the areas of coral can cause problems when the coral is touched. Reefs are protected and people are asked to be careful when diving or snorkeling.
- Predators: fish, humans

Did You Know?/Fun Facts

- Open Brain Coral is also known as Folded Coral.
- Corals are hermaphrodites, meaning they have both male and female characteristics within the same organism.

Biofacts - #338, #339, #1069 coral skeleton; #425 brain coral

Children's Books

- *Peppy's Coral Kingdom* by Nancy Lucas Reading Level Ages 9-12

Sources:

- Brough CFS, C., & McBirney, C. (1998-2011). *Open brain coral*. Retrieved from http://animal-world.com/encyclo/reef/lg_stony/TrachyphylliaGeoffroyii.php
- FreshMarine.com, . (2008-2010). *Open brain coral (red) - trachyplyllia geoffroyi - green open brain coral*. Retrieved from http://www.freshmarine.com/open-brain-red-coral.html
- Wildscreen, (2003-2009). *Open brain coral (Trachyphyllia geoffroyi)*. Retrieved from http://www.arkive.org/open-brain-coral/trachyphyllia-geoffroyi/info.html?displayMode=factsheet