

Favia fragum (Golfball Coral)

Order: Scleractinia (Stony Corals)

Class: Anthozoa (Corals and Sea Anemones)

Phylum: Cnidaria (Corals, Sea Anemones and Jellyfish)



Fig. 1. Golfball coral, *Favia fragum*.

[<http://diveadvisor.com/marine-animals/golfball-coral>, downloaded 15 October 2016]

TRAITS. One of the smallest corals, mature colonies are less than 100cm square in size (Soong, 1993). *Favia fragum* is a round coral which is shaped like a golfball, hence the common name (Fig. 1). They contain a hard skeleton with grooves just like a golfball. The living polyps (individuals in the colony) covering the white skeleton range from pale yellow to brown and are not very visible in their natural habitat, especially when the colony is young (Fig. 2) (Coralpedia, 2016).

DISTRIBUTION. *Favia fragum* can be found in the Caribbean, Florida, Bahamas, southern Gulf of Mexico and Bermuda, also further south in Brazil, and on the tropical west coast of Africa (Fig. 3) (IUCN, 2016). This species was observed by the 2012 Bioblitz at Chaguaramas, Trinidad (BioBlitz, 2012).

HABITAT AND ECOLOGY. *Favia fragum* is commonly found in habitats of depth 0.5-5m, but can occur up to 20m, in fore reefs and back reefs. Where this species is found depends on whether or not the habitat has the right substrate (IUCN, 2016); they are found on rocky substrate (Fig. 2). It is said that this coral dispersed through rafting (larvae attach themselves to objects found in the ocean) and this is dependent on oceanic currents (Hoeksema et al., 2012). The survivorship of the larvae depends on the temperature; if water temperature gets to a maximum of 31°C the larval survivorship drops by 13% (Randall and Szmant, 2009).

REPRODUCTION. *Favia fragum* is viviparous which means they bring forth their young ones which have developed inside the polyps. This is why it is considered a brooding species. All species of this family (Faviidae) exhibit similar reproduction; they are hermaphroditic (Kojis and Quinn, 1982) and their sexual reproductive organs, ovaries and testes, are found in the same individuals but mature one after the other. They release larvae based on lunar phase, after full moon (Szmant et al., 1985). Juvenile *Favia fragum* need up to 12 hours of light and a continual supply of food to survive. If light and food decreases, the juveniles do not die but their cells begin to degrade (Lewis, 1974).

APPLIED BIOLOGY. Coral reefs are always under threat. Corals can become prey to organisms such as *Diadema antillarum*, commonly known as the sea urchin. Moreover, they battle the white plague disease (which causes tissue loss, leaving the white skeleton) which is a horrific epidemic which spreads quickly throughout a habitat. In combating the threat to *Favia fragum* there is conservation of these organisms in Marine Protective Parks in areas such as Florida and the Bahamas. Furthermore, measures are being taken to keep this species alive. These include artificial propagation, preserving gametes by means of cryo-preservation, and habitat restoration actions (IUCN, 2016).

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Fig. 2. Young golfball coral, *Favia fragum*, on hard substrate.

[<https://conference.ifas.ufl.edu/floridakeys/Presentations/PDFS/Session%201/Chiappone-Juvenile%20corals-Session1.pdf>, downloaded 12 October 2016]



Fig. 3. Golfball coral geographic distribution.

[<http://maps.iucnredlist.org/map.html?id=133594>, downloaded 23 November 2016]

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