

Plexaura homomalla (Black Sea Rod)

Order: Alcyonacea (Sea Fans)

Class: Anthozoa (Corals and Sea Anemones)

Phylum: Cnidaria (Corals, Sea Anemones and Jellyfish)



Fig. 1. Black sea rod, *Plexaura homomalla*.

[<http://static.panoramio.com/photos/large/89993126.jpg>, downloaded 22 October 2016]

TRAITS. Mostly laterally branched (with some symmetrical branches present), a bushy soft coral with a height of up to 35cm for mature colonies. There are two variations: forma *kuekenthali* which has slender, taller branches of diameter 2.5mm; and forma *homomalla* with shorter and more rigid branches 4-5mm in diameter (De Kluijver et al., 2012). Colours of the stalk include brown and black, with cream, yellow or brown polyps (Fig. 1) (Sheppard, 2013). Surrounding the polyps are flat (sometimes raised) cup-like cavities (calyces) which act as a protection and support mechanism (De Kluijver et al., 2012).

DISTRIBUTION. Indigenous to the Gulf of Mexico, Caribbean Sea, Bahamas as well as south Florida (Weinheimer, 1969) (Fig. 2).

HABITAT AND ECOLOGY. Resides in shallow waters of coral reefs and usually are found at a depth of 2-53m, with the forma *kuekenthali* thriving at greater depths and the forma *homomalla* closer to the surface. The temperature in which this organism subsists in is usually within a range of 25-28 °C with a salinity level of 35-36 PPT (Ocean Biogeographic Information System, 2012). *Plexaura homomalla* feeds via a symbiotic relationship with single-celled algae called zooxanthellae. The algae provide a food source to the black sea rod via dissolved organic material, such as glucose, vitamins and amino acids (Sterrer, 1986). The black sea rod also feeds directly from its immediate environment, catching zooplankton using the tentacles of the polyps (Lasker, 1981; Coffroth, 1984).

REPRODUCTION. Not much information is available for this species, but the related coral *Pseudoplexaura porosa* has synchronized large scale spawning between colonies over 30 minutes each night for a few days after summer full moons (Kapela and Lasker, 1999) (Fig. 3). The larvae settle after 5 days and attract zooxanthellae to begin the symbiotic process and eventually grow into adult colonies. These colonies may persist for a few decades (Jordan-Dahlgren, 2002).

BEHAVIOUR. *Plexaura homomalla* undergoes metabolic processes, one of which produces a substance called prostaglandin – a lipid. Although the immediate use of this substance is unknown, it accounts for 2-3% of the weight of the organism (Valmsen, 2001). The release of the substance may act as a protective mechanism; predatory fish are said to have illnesses inflicted upon them when this substance is ingested which results in vomiting (Weinheimer, 1969).

APPLIED BIOLOGY. The abundance of the lipid prostaglandin has been studied as it is used extensively in the medical field. It is able to induce labour, quickens the healing of stomach ulcers, and has a significant effect on the reversal of cyanotic congenital heart disease (De Kluijver et al., 2012).

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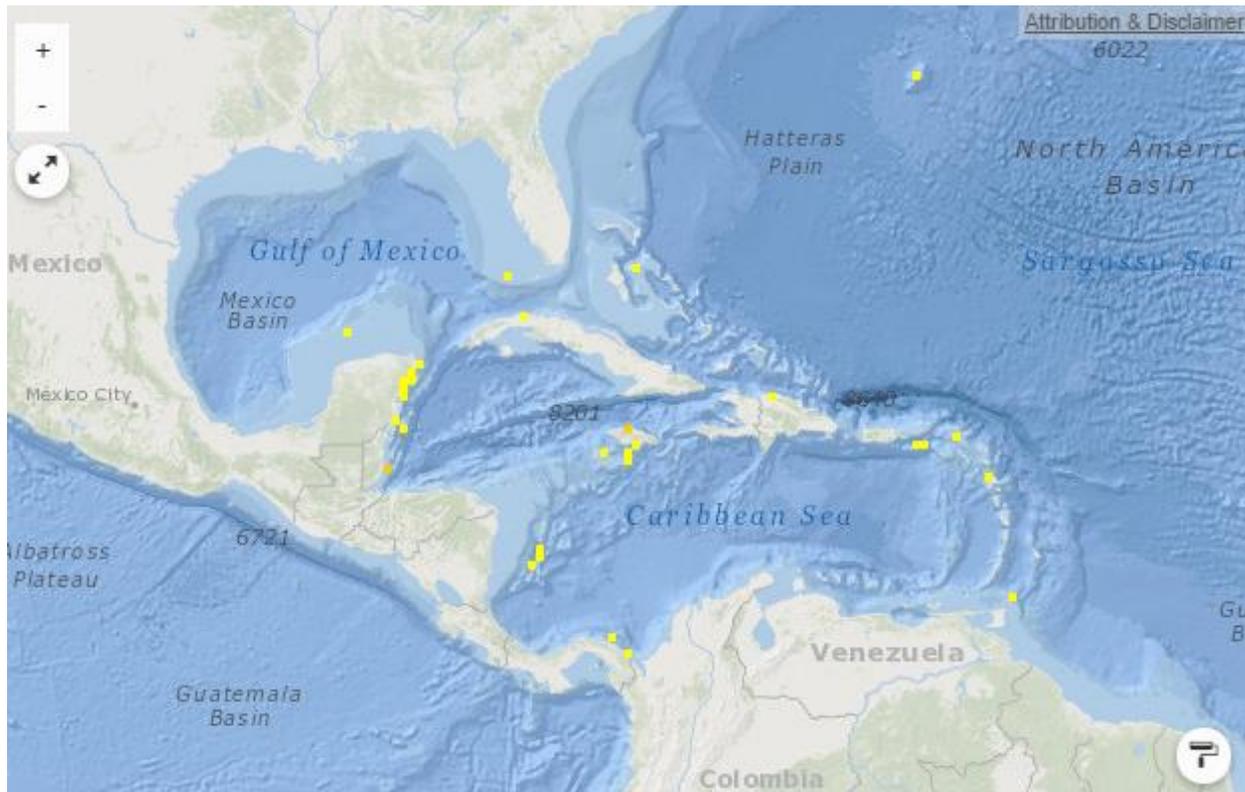


Fig. 2. Black sea rod (*Plexaura homomalla*) geographical distribution.

[<http://www.gbif.org/species/2261367>, downloaded 22 October 2016]



Fig. 3. Black sea rod (*Plexaura homomalla*) reproduction: spawning.

[<http://m6.i.pbase.com/u37/imagen/upload/23837046.spawningsearod.jpg>, downloaded 22 October 2016]

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