Siderastrea siderea (Massive Starlet Coral)

Order: Scleractinia (Stony Corals)
Class: Anthozoa (Corals and Sea Anemones)
Phylum: Cnidaria (Corals, Sea Anemones and Jellyfish)

Fig. 1. Massive starlet coral, *Siderastrea sidereal*.

[http://www.inaturalist.org/taxa/112557-Siderastrea-siderea, downloaded 21 September 2016]

TRAITS. Massive starlet corals live in groups of polyps, making stony structures that are shaped like boulders or are low lying and dome-like (Fig. 1). The surfaces of these structures are unwrinkled, with many depression throughout the surface. The corals are reddish-brown in colour and can be up to 2m wide on the sea floor. The corallites (cups holding the polyps) are about 5mm across, with about sixty small folds referred to as septa (De Kluijver et al., 2012).

DISTIBUTION. This coral species is widespread in the western hemisphere; they can be found in the Gulf of Mexico, the Bahamas and Bermuda, in the Caribbean Sea and along the coast of Florida (Wikipedia, 2016).

HABITAT AND ECOLOGY. Massive scarlet corals can be found in depths as deep as 70m but they generally occur between 5-15m hence they prefer shallow waters (IUCN, 2016). These corals thrive in reefs but are not equipped to survive in unclean, muddy waters or tidal pools. Massive scarlet corals have a symbiotic relation with zooxanthellae which is a type of algae that resides within the tissue of the coral polyps, giving the corals access to the valuable nutrients produced by the algae during photosynthesis (What Are Corals?, 2016). Due to their reliance on these algae their optimum growth will occur in shallow waters where sunlight is abundant and photosynthesis can therefore occur readily. Massive starlet corals are colonial corals which means that they live in groups of many individual polyps, which can survive for many years.

REPRODUCTION. Massive starlet corals undergo sexual reproduction via a process called spawning. This occurs when corals release their gametes into the water (Fig. 2), that is sperm and eggs, which meet and fertilize to form larvae. These larvae then sink and land on rocks in the reef to form new polyps, and eventually new colonies of corals. The process of spawning occurs annually, usually in the latter stages of summer (What Are Corals? 2016).

APPLIED BIOLOGY. The massive starlet coral is listed as being of Least Concern on the IUCN Red List meaning that they have very stable populations. They are however slightly in danger of coral bleaching but they have also shown great recovery ability towards bleaching (IUCN, 2016). Other dangers to this species are climate change and coral diseases such as dark spot syndrome. Studying the species has been highlighted as a method of developing a plan to conserve it (IUCN, 2016).

REFERENCES

De Kluijver, M, Gijswijt, G,, de Leon, R and da Cunda, I. 2012. Round starlet coral (*Siderastrea siderea*). Interactive Guide to Caribbean Diving. Marine Species Identification.

IUCN. 2016. *Siderastrea siderea*. IUCN Red List of Threatened Species. http://www.iucnredlist.org/details/133389/0.

What Are Corals? 2016. http://myfwc.com/research/habitat/coral/news-information/what-are-corals/.

Wikipedia, 2016. *Siderastrea siderea*. https://en.wikipedia.org/wiki/Siderastrea_siderea,.

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Fig. 2. Massive starlet coral releasing gametes into the water.

[http://www.coralreefphotos.com/spawning-starlet-corals-stony-corals-spawning/ downloaded 20 October 2016]