



## Green Surf Anemone (*Anthopleura xanthogrammica*)

by Stefan Linquist.

The flower-like body of the green surf anemone makes it seem more like a plant than an animal. In fact, this animal's green colour is due to a single-celled plant living inside its bodily tissues. These algae cells harness energy from the sun, converting it into sugars that the anemone consumes. In turn, the anemone provides the plant cells with a safe micro-environment in the inter-tidal zone where sunlight is plentiful.

Green surf anemones are also carnivores. This species lodges itself firmly within wave exposed cracks along the rocky coastline close to mussel beds. Mussels occasionally dislodged by wave action or by sea-star predation fall into the green surf's waiting clutches.

These anemones reproduce sexually. Eggs and sperm are broadcasted into the open water during late spring or summer where they meet and fertilize. Larval anemones eventually settle in the inter-tidal where they spend the remainder of their adult lives relatively immobile. Although it is difficult to determine a sea anemone's precise age, a British institution once had a green surf anemone in their collection for 75 years. These durable animals are very tolerant of extreme fluctuations in salinity and temperature, a requirement for any inter-tidal species. Once a green surf anemone is entrenched in a good spot, there aren't many things that can remove it.

With few predators, space is the main ecological factor limiting population sizes of these animals. Competition for a spot in a prime rocky crag near mussel beds is fierce. Green Surf anemones have evolved a special elongated tentacle that is used specifically for fencing over real estate.

It has recently been discovered that the green surf anemone is of potential pharmaceutical value. A drug has been derived from the animal's tissues is effective in fighting heart disease.

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