## Checklist

Before purchase make sure that:

- 1 You have the appropriate equipment and position for the aquarium.
- You have researched all the species you are interested in and your final choices are all compatible.
- 3 You are familiar with how to transport and release your fish.
- 4 You are aware of the daily, weekly and monthly maintenance your aquarium will require.
- 5 You are prepared to look after your fish properly for the duration of their life.

# Equipment

- 1 Glass or plastic aquarium
- 2 Gravel cleaner
- 3 Water testing kit
- 4 Marine salt
- 5 Marine substrate & live rock
- 6 Filter & protein skimmer
- 7 Food
- 8 Heater, thermometer & hydrometer
- 9 Reverse osmosis/de-ionised water or tap water conditioner

### Before purchase make sure:

- 1 The water parameters are as advised
- 2 The aquarium is well-established
- 3 The species you choose is compatible with your set-up

# Never release your aquarium animals or plants into the wild

Never release an animal or plant bought for a home aquarium into the wild. It is illegal and for most fish species this will lead to an untimely and possibly lingering death because they are not native to this country. Any animals or plants that do survive might be harmful to the environment.

# Important things to remember

### Always buy...

test kits and regularly check the water for ammonia, nitrite, nitrate and pH. This will allow you to make sure the water in your aquarium is not causing welfare problems for your fish.

### Establish a routine...

for testing the water in your aquarium. Record your results to enable you to highlight fluctuations quickly. Also check the temperature of the water.

#### Maintain...

the water in the aquarium within the accepted parameters highlighted in this leaflet. You may need to do regular water changes to achieve this.

### Always wash your hands...

making sure to rinse off all soap residues, before putting them into your aquarium. Wash your hands again afterwards and certainly before eating, drinking or smoking.

### Never siphon by mouth...

A fish tank can harbour bacteria which can be harmful if swallowed. Buy a specially designed aquarium gravel cleaner which can be started without the need to place the siphon in your mouth.



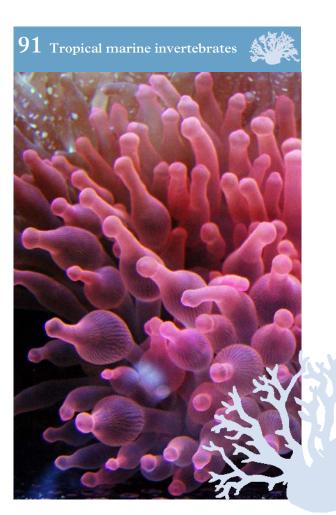
Scan this code to download an electronic copy If in doubt contact your OATA retail member for further information



How to care for...



# Anemones



### Introduction

Anemones can add vibrant colour and diversity to a marine tank, however they need proper care and good water quality to ensure they remain healthy.

Anemones are Cnidarians and are closely related to corals, jellyfish and hydroids. They can be found throughout the world from tropical reefs to temperate tide and rock pools.

# Water requirements

Anemones are very sensitive to water quality, therefore it is recommended that the parameters are within the following, although these animals may acclimatise to different water over time:

Temperature: 23 to 26°C

**pH**: 8.1 to 8.4

Ammonia: 0mg/l (0.01mg/l may be tolerated for short periods)
Nitrite: 0mg/l (0.125mg/l may be tolerated for short periods)

**S.G**: 1.020 to 1.025 at 22 to 26°C

# **Biology**

Sea anemones available for aquariums are varied. Some can grow up to 3ft across in the wild so advice should be sought from your retailer regarding the species in which you are interested.

As Cnidarians, these organisms contain stinging cells in the tentacles known as nematocysts. These vary in strength. The majority are not dangerous to humans, although some, such as the carpet anemones, can produce mild stings similar to that of a nettle.

Some anemone species are separate sexes and others are hermaphrodites. However both are capable of sexual and asexual reproduction through the process of budding.

Anemones are found stuck to rocks and substrate via the muscular foot known as a disc. The mouth is situated centrally on the surface of the anemone surrounded by the tentacles.

Anemones may thrive for many years in an aquarium in pristine water quality and without ailments. However be wary that anemones which are seemingly healthy have been known to stop eating and die for no clear reasons.

# Aquarium requirements

Some anemones can get quite large and their size changes throughout the day. Consider a larger aquarium for keeping anemones, although some smaller species have been kept in nano aquaria.

Good water circulation provided by your filter and additional powerheads will be beneficial. Heater, thermometer and hydrometer are essential. Like corals, most anemones have photosynthetic zooxanthellae and therefore require lighting.

Anemones are motile creatures that can move around their environment. A base of live rock will aid filtration and provide a variety of habitats for the anemone to explore and be best suited to.

Be careful to cover any internal pump inlets; anemones can often be attracted to fast flowing water and their delicate tissues can become easily damaged if drawn into a pump inlet.

### Maintenance

At least every two weeks, a partial water change of 25 to 30% is strongly recommended (a siphon device is also useful to remove waste from the gravel). This help to reduce the build-up of potentially harmful nitrates and other pollutants. Replacement water should be dechlorinated using strong aeration or a tap water conditioner (if not using reverse osmosis water). Ideally, replacement water should be heated and enough salt should be added to achieve the correct salinity.

Filters should be checked for clogging and blockages. If the filter needs cleaning, then do not wash it using tap water; any chlorine present may kill the beneficial bacteria that has established within the media. Instead, it can be rinsed in tank water which is removed during a partial water change. This should reduce the number of bacteria lost.

Good husbandry is essential because anemones can be sensitive to even the smallest amounts of ammonia and nitrite. Test the water weekly to monitor ammonia, nitrite and nitrate, especially after initial set-up and after adding new fish. If keeping hard corals, monitor calcium levels for healthy growth. Do not forget to check the salinity as this may increase due to evaporation of water.

Anemones are highly sensitive to copper which may be found in some fish medications. If a medication is required, consult your retailer to obtain a copper-free medication.

# Feeding

Anemones feed using two mechanisms. The first is through its symbiotic zooxanthellae, so ensure the aquarium has sufficient lighting. An anemone which is utilising its zooxanthellae will be colourful and expand on a regular basis. The second is through the carnivorous feeding upon zooplankton and in some cases fish. This can be provided by the manual addition of frozen shrimp, mussels and lancefish and should be carried out once every couple of weeks. Remove any uneaten food from the aquarium to reduce the build up of waste.

It is important to monitor your individual anemone regularly to establish the best feeding regime because each individual may be different from the next.

# Potential problems

Monitor the behaviour of your corals. These animals are not active, however they may be found to be 'open' or 'closed' throughout the day. Remaining 'closed' or withdrawn for prolonged periods, or loss of colour, may be signs of illness. Check the water quality immediately. Insufficient lighting may cause the death of zooxanthellae which will be shown by coral becoming noticeably paler, known as corals bleaching. If in doubt ask your OATA retailer for advice.

# Compatibility

A water quality problem will affect anemone behaviour and can be shown by loss of colour, shrivelling, rotting of the body and disc. Immediately test the water if any of these symptoms are shown. Poor water quality is the main cause of disease outbreak in aquariums. If in doubt ask your OATA retailer for advice.

# **Breeding**

Sexual reproduction occurs through the production of eggs and sperm which creates a free swimming planular larvae. This larvae will then settle onto the substrate and form a small polyp which will feed and grow into an adult. Asexual reproduction occurs through the budding of an adult, a small bulge will be produced from the side of the individual forming a replica of the adult.