

## Maintenance...

The water quality needs to be monitored frequently, especially during initial set-up and when stocking the tank. This helps to reduce the chance of causing health problems to the animals through high ammonia (NH<sub>3</sub>) and nitrite (NO<sub>2</sub><sup>-</sup>) levels. Tests should also include pH, phosphate and calcium.

Once stocked, the tank should be topped up with freshwater to maintain the water level and the S.G. between 1.020-1.025. A protein skimmer will need to be emptied and the fish require feeding two/three times a day. If feeding invertebrates, it is advisable to switch off the water pumps temporarily to allow them to feed. A small water change (10-15%) is advisable every two to three weeks, this helps to reduce nitrate (NO<sub>3</sub><sup>-</sup>) levels. A siphon should be used to remove silt from the gravel.

## Transporting and releasing your fish...

Fish are easily stressed by noise, movement and excessive vibrations. When transporting your fish, try to reduce the stress levels the fish are subjected to by taking due care and attention when taking them home. Your retailer will usually sell you your fish in a plastic bag. Try not to keep them in this too long. It is advised that once purchased, the fish should be taken home straight away.

Once home, your fish will need to acclimatise to their new environment. It is best to switch off aquarium lights and float the bag in the water of your tank for up to 30 minutes. Once the temperature in the bag is the same as the aquarium water, slowly add small volumes of aquarium water to the bag. This allows the fish to acclimatise to any differences between the retailer's water and your own. This can take up to an hour. Once complete, slowly release the fish trying to add as little of the retailer's water into the aquarium as possible and discard the bag and excess water. (Note: this process may take longer with more specialised species e.g. Coral). Ask your retailer for any specialist advice regarding the species you have selected.

Corals and anemones should never be taken out of the water entirely, so take care when transporting and releasing.

Some aquarium animals release toxins when stressed, this often occurs during transport (e.g. Boxfish). Therefore, do not place more than one fish in a bag or put the water the fish are transported in into your aquarium.

## Checklist...

Before purchase ensure that:

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

**NEVER RELEASE YOUR AQUARIUM ANIMALS OR PLANTS INTO THE WILD.**

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

*If in doubt contact your OATA*

*retail member for further information*



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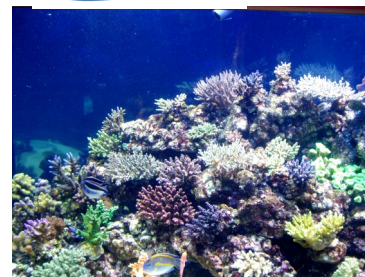
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## How to...



## Set up and maintain a marine aquarium

## Introduction...

Keeping an aquarium at home can be an enjoyable and rewarding hobby for adults and children alike. It has been shown that a healthy and well maintained aquarium can reduce your stress levels.

Marine aquariums can add fascinating colours and a wide range of organisms to your home. However, before purchasing an aquarium, you should consider all aspects raised in this leaflet to ensure that the underwater community which you choose to create is looked after properly and that the fish remain healthy.

As a general rule you should, within reason, buy an aquarium as big as possible. Larger aquariums contain more water and are easier to maintain a healthy environment for your fish.

## Equipment....

The equipment required for a marine set-up is more advanced than that of a freshwater one. Below is a preliminary list of equipment. If in doubt with what you need, ask your retailer for advice.

### INITIAL REQUIREMENTS:

- 1) Glass/acrylic aquarium and suitable stand. (It is easier to maintain good water quality in larger tanks.)
- 2) Marine aquarium salt and bucket for mixing
- 3) Filter
- 4) Marine gravel/sand
- 5) Live rock
- 6) Thermometer
- 7) Hydrometer
- 8) Heater
- 9) Gravel cleaner
- 10) Water testing kits
- 11) Food

### ADDITIONAL USEFUL EQUIPMENT INCLUDES:

Protein skimmer and power heads, UV steriliser, advanced lighting systems (especially for a reef tank), an ozoniser, reverse osmosis (RO) water filter.

## Positioning your tank...

Once all of the equipment is ready, the tank should be positioned carefully to ensure it is:

- i) Out of direct sunlight and away from sources of heat and draughts.
- ii) On a perfectly flat level surface or stand which can indefinitely support the weight of the tank when its filled with water.

## Mixing your saltwater...

Before the water is added to the aquarium, specialised marine salt for aquariums needs to be mixed with the water. A specific gravity (S.G.) of 1.020-1.025 is required at between 23-28°C.

Salt water should be prepared carefully following the manufacturers guidelines.

## Maturing your tank...

Marine fish have little tolerance of ammonia or nitrite; therefore, the tank needs to be "matured" before any fish can be added. Maturing a tank involves growing a population of nitrifying bacteria in the filter media. These bacteria are responsible for quickly breaking down fish waste, such as ammonia, to nitrite and then nitrate, which is less toxic.

Once the aquarium has been filled with salt water and gravel/sand, the salinity should be monitored with a hydrometer for a few days to ensure it is stable.

There are three options to mature the tank. A commercially available bacterial supplement can be added as per manufacturers instructions, or a base of cured live rock (this is marine rock which contains nitrifying bacteria and invertebrates-as such, you will not be able to use copper based treatments) or the addition of fish. Once one of these has been used, the ammonia, nitrite and nitrate levels need to be monitored. There will be an initial ammonia peak, followed by a nitrite peak. If maturing with fish, then ensure these levels do not rise above the guidelines below. Once these two parameters have dropped to a safe level (preferably to zero), the tank is mature and ready to begin stocking slowly (see table below). The time for maturation varies and requires patience.

	Ammonia (NH <sub>3</sub> )	Nitrite (NO <sub>2</sub> <sup>-</sup> )
"safe" levels	0.01mg/l	0.125mg/l

## Adding live animals...

There are different types of marine tank which can be established. Reef; fish only and community. On the whole, a fish only tank is a good starting point for a newcomer to keeping a marine aquarium. A fish only tank can easily be turned into a reef tank in the future as you become more experienced, though you may need to buy additional equipment. Remember, if you do keep any invertebrates remember you should never use copper treatments as these will kill them.

Always seek advice before purchasing fish. Not all species are compatible. Some have specialised requirements and others may become aggressive with age.

Add fish slowly. Overstocking or stocking too quickly may cause "new tank syndrome" where the filter is not capable of coping with the increased waste load. The water quality can quickly deteriorate to unhealthy levels and sometimes fish will not survive.

Be aware of what a healthy fish looks like. If unsure, ask your retailer. Healthy fish have clear bright eyes, undamaged fins, intact scales, no ulcerations or bumps, appropriate swimming and steady breathing. Do not purchase a seemingly healthy fish if sickly fish are present in the tank with it, as fish can carry diseases without showing symptoms.

## Stocking levels...

It is not possible to say exactly how many fish your aquarium can hold. Marine fish are often territorial and therefore one fish may claim large areas of the tank, displaying aggressive behaviour to others in the tank. This can sometimes be reduced by moving around the rock and décor display.

Remember to check the compatibility of your fish and invertebrates with your retailer. Some species may start out small but turn out to be far too big for your aquarium. Also there are several marine fish which exude toxins or are venomous so be sure to research the species or ask for advice before purchase.

Do not expect to fill your tank with as many fish as your local retailer. They are able to stock tanks more heavily than home aquariums due to their management expertise and often advanced filtration systems.

Some species require bright lighting, others fast water flow. Ask your retailer for advice, it is often simple to adapt your aquarium for species requirements. The closer the aquarium mimics the natural environment, the healthier the fish will be.