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## 10 EASY STEPS FOR THE SET- UP AND MAINTENANCE OF A “FISH ONLY” MARINE AQUARIUM

- 1) The set up and maintenance of a marine fish tank is little different to the average freshwater tropical tank. In both cases of course, we need to provide a reasonable approximation of the environment that the fish naturally inhabits, particularly from the perspective of water quality. Freshwater fish have evolved in an environment that changes from day to day within given ranges (p.H. temperature etc. fluctuate regularly.) Marine fish on the other hand have evolved in an environment that changes very little, with temperature of tropical oceans only fluctuating by a few degrees through the year, and p.H. salinity etc being very stable. To achieve this level of stability in the aquarium is very important, and usually will require a bit more solid filtration than a novice freshwater keeper might have. Suitable filtration for a marine tank includes some or all of the following: A good canister filter, powerhead driven undergravel filters, a trickle filter (either external, or built in such as in the Aqua – One tanks and others of their style. Protein skimmers are totally optional for a fish only set up, but they do help with water quality and help reduce the amount of waterchanging needed, so a skimmer may be something you may want to look at later in the piece.
- 2) Choose your tank, a beginner's “fish only” tank should hold at least 100 litres of water, as tanks of this or greater volume will give a greater degree of stability. This means you get a bit of extra time to react to any water quality issues before they become critical. The exceptions to this general rule are the small setups that are designed to house a restricted number of animals. Usually these type of set ups will have already been selected for their suitability to house the stated number or species of animals.
- 3) Set up your selected filters, and fill the tank to within about 5 cm of the top with tapwater. This is the only time you will ever put raw tapwater into your marine aquarium. Install your heater, and wait for the tank to stabilise at 25 degrees. Add the required amount of Tristart dechlorinating agent and begin to add the salt into the water. 1 Kg of salt will bring approximately 30 litres of water to the right Specific Gravity (S.G.) or salt content. Calculate roughly how much salt you believe that you will need to add, and put two thirds of that amount into the tank. Allow the filters to move the salt around and totally dissolve it, this may take a few hours. Once the salt has completely dissolved, check your S.G. with your hydrometer. A reasonable target for the S.G. in a “fish only” tank is between 1.021 – 1.023. Obviously it is easier to add a little bit more salt than it is to take some out once it's in the water, so we start with an amount of salt that is going to give you a bit lower S.G. than you need, and then increase the salt content gradually until you reach your target. This mixing process is good practice for later when you will be doing your water changes.
- 4) Now that the tank is on temperature, and the salt level is right, check the p.H. Your target p.H. in a salt water aquarium is 8.2, with anything below 8.0 being dangerous to your fish. Adding a prepared buffer compound will readily fix a low p.H. and it is hard to overdose with these types of compounds, so at this stage a rounded teaspoon per hundred litres or so is recommended. Once this has had a chance to dissolve and mix through the tank, measure your p.H. with your test kit.
- 5) Introduce a bit of Live rock to the tank now that the water conditions are stable. Approximately 3 or four kilos for each 100 litres of water is a reasonable amount, though the more the better. Live rock is rock that has been collected directly from reef areas, and will have a lot of the beneficial bacteria that enable the fish's waste products to be broken down from quite poisonous compounds into relatively harmless ones. This is of course the same sort of processes that occur in the freshwater aquarium. For more information about these processes consult our “New Tank Syndrome” Caresheet.
- 6) This is the hardest step of any marine tank set up. I've got a tank with some rocks in it and I've got it decorated really cool so now what do I do?? **Wait.**
- 7) Monitor the water for levels of ammonia and nitrite, as these both need to peak and then recede before the tank is ready to accept fish. This process will vary in the time taken to undergo in every different tank. Unfortunately this is a process that needs to happen in it's own time. It may take as little as two weeks or sometimes, (not often) it can take as many as six or even eight weeks. Monitor p.H. and salinity throughout this period and adjust them as necessary. Usually checking the p.H. twice a week is ample, and S.G. once

a week or so is also ample. If you find that your S.G. is creeping up, it will be due to evaporation from the aquarium, and it needs to be diluted down with some dechlorinated tap water or better still, with purified water such as reverse osmosis water. If the levels of ammonia start to become extreme, or if you see heavy clouding of the aquarium's water, then a small water change will help to keep things in control. During this period, there is little need to run the lighting and a couple of hours a day is usually ample. Running lights for more than a couple of hours a day during this period may encourage unwanted algal growths.

- 8) Ammonia is down to zero!! Nitrite is down to zero!! YEEEEHHAAAAAW!!!! **It's finally fish time!!!!** One last check of p.H. before your first purchase just to make sure that the tank is still right, and it's off to the store. The temptation is of course to go whoopee and start introducing fish galore right? After all I've been really patient till now, so I want them ALL! This is not a good way to approach things. After all; the reason we have been being so patient with the tank till now is to allow the bacteria that we need, to build up to a reasonable level. The introduction of every new fish means that more bacteria are required to cope with the extra waste that's now going to be generated. So of course the key is to introduce only a couple of fish first up, and then to spread the stocking of the tank over a period of time. Usually one, or possibly two new additions per fortnight is as much as you should be contemplating.
- 9) Your tank is finally coming to life, your first few fish have been in for a couple of weeks now, you've monitored p.H. & that's all been o.k. . You've just introduced a couple more animals, but the tank is starting to get a bit green around the edges. **It's water change time.** The idea with the water changes is to dilute the build up of waste products from the fish, and to reduce the available nutrients in the tank that enable algae to grow. Like the water changes that you've done on freshwater tanks, a percentage of the water is all that is needed. Usually around 30% fortnightly is a reasonable amount for most people to change, but this will vary depending on how much food goes into the tank and how many fish are in there. Unlike the changes on a freshwater tank, your saltwater needs to be prepared and ready to go in to the aquarium BEFORE any water is removed from the tank, so mix this up before you intend to begin the water change.

Syphon out any debris from on & in the gravel bed and remove just as much water as you have ready to go back in. Keep in mind that pre prepared water is available from the store if you're running short of time. While the water level is low, give the glass a good wipe with a non scratching cloth that is chemical free The Aqua – One Algae Scrubs are great. It is important to ensure that filters & heaters are switched off if they are going to protrude from the water while the water change is taking place. In fact it is a good practice to turn them off whenever you are going to put your hand in the water, but don't forget to turn them back on!! Refill the tank, & check S.G. and p.H. Finally The most important step of all...

- 10) **Sit Back, relax, and enjoy the vibrant colours, personalities and behaviours of your spectacular marine fish.**