

TANKS FOR THE MEMORIES OR LIFE AFTER A GOLDFISH BOWL

by Deborah Ralf

In the beginning Rodney and I had a goldfish in a bowl and we called him Goldie - how original! But he looked lonely, so we moved up to a few goldfish in a tank. Even then we still had no idea what we were really doing and it was more luck than good management that those goldfish survived at all.

Then the frustration of seeing all those beautiful tropical swimming around in the pet shops grew too much. We asked "what do we have to do to change from goldfish to tropicals?". The answer seemed too simple to be true: just buy a heater. So we did. Mind you, it was by no means as easy as that but it opened up a whole new and fascinating world that soon became part of our lives. For most of the ten years or so that we have been keeping fish it has been our favourite hobby.

The present article will, I hope, help those people who are just beginning to turn to tropicals, so that they too can discover the pleasures of fish keeping and breeding. What follows is information on setting up and keeping an aquarium, with a hint of some things that beginners may wish to try their hands at later.

Education: It's amazing what one can find out from reading a book or magazine. But the most expensive books are not always the best, so look before you buy, or even better, borrow from a library first and then, if you still want to buy one later, you will know what to look for. Ask and read as much as possible and you will then usually find the best and easiest ways of setting up an aquarium, plus information that will be useful later, before becoming committed. In other words: be prepared.

Equipment: Decide at the outset what fish you wish to keep, as this will determine to some extent what equipment you will need. Now it's up to you to decide whether to buy everything new or to start looking for secondhand bargains. If you opt for the latter, just make sure you know beforehand what a new tank, stand, heater, light and a few filters are worth, so that you can recognise a real bargain if you see one. In particular, check any secondhand tank for cracks or signs of leakage. For most tropical fish, the basic requirements are similar. You will need a tank with lids, foam sheeting to be placed under it, a tank stand, a light, a heater (for a 3' tank, 150-200w, fully submersible is best), gravel (medium grade), rocks, filter and filter medium (air pump, air hose, airstones are optional), water syphon, nets, pH test kit and adjusters, plant food, bucket for fish use only, tank backing and an aquarium thermometer.

The aquarium: A 3' tank is a convenient size to begin with and it will give a good idea of what can be achieved with a modest outlay. Later on, you may wish to get a larger one, to serve as the main attraction in a room, or smaller ones for spawning and raising young fish.



Setting up - day 1: Decide before positioning your tank whether you want any backing. Suitable materials for this are black cardboard, black or green garbage bags, or picture aquarium backgrounds. Remember that an aquarium full of water will probably be much heavier than you realise: a standard 3' tank holds about 23.5 gallons (106 L) and that's a weight of some 233 lb (106 kg). The tank should be placed where it will receive natural light but no direct sunlight, definitely not in front of a window, where high light levels and wide temperature fluctuations would cause problems. Make sure the tank, on its supporting foam, is level and that its stand is strong and stable, before adding anything to it. Place the gravel on shade cloth in a plastic garden sieve, over a bucket and wash it thoroughly (outside the house) with a hose. The clean gravel can then be placed in the tank, to form a layer 1.5 - 2" deep all over. If you

elect to use undergravel filters, you may wish to cover the filter with a layer of filter wool before adding the gravel. However, we have never used them as they make it harder to clean out an aquarium completely - a task that is usually necessary every year or two, because of the inevitable build-up of fish wastes and other debris. Once the gravel is in place you may add any rocks or ornaments, always remembering that more may be added later if desired. Make sure that the rocks are suitable for use in an aquarium. Now you may begin to fill the tank with water. Use a hose and aim the jet either at a back wall or a rock, to avoid disturbing the gravel too much. Stop short of a complete fill as there are a few other items still to be added. Place the heater in the centre, on the back wall of the tank. A fully submersible one is best as the suckers that come with most kinds won't last as long as the heaters do. Plug the heater in (as long as it is under water) and add the thermometer.

There are all sorts of filters available but for a display aquarium, a canister filter or an internal or external power filter look and perform the best. A filter that will turn over the tank water 2-3 times every hour is usually recommended and remember to make allowances for the gravel and rocks in calculating the final capacity. Set up the model you have chosen, with due attention to the manufacturer's instructions. One canister or power filter should be sufficient for a 3' tank and if you wish to see bubbles from an airstone or other stranger ornaments, now is the time to attach them to an air pump.

Day 2: Check that everything is working as it should and that the morning temperature is satisfactory (about 25°C). After a cold night this is when the temperature will be at its lowest. Another check in the afternoon will be needed to confirm that the heater is set to maintain this temperature and is not causing overheating. The pH of the water should also be checked and adjusted, if necessary, to 7 (neutral), so that it will be suitable for most community fish. It will not be necessary to

dechlorinate the water, provided the tank is allowed to stand, with filtration running, for a couple of days. Add some plant food and, if possible, a handful of gravel from an established tank. Then plants may be added and make sure that they are well planted. Place the taller growing species at the rear and the shorter ones in the foreground. Do not try expensive specimens or too many varieties at this early stage as the aquarium will not contain enough nutrients to support them. It's better to wait until the plants begin to grow and show which are the hardiest. Check your books to be sure you buy only aquarium plants. The aquarium light should be on for 12-13 hours daily, say 8 a.m. to 9 p.m., for the plants and for the fish to come.

Day 3: This is the day you have waited for, so check again that all is working well and the pH is neutral. In the past two days, you should have been reading frantically and noting what fish of interest to you are suitable for a community tank with neutral water. Of course, not all will be available but if you belong to a club, the range on offer from other members may surprise you. So ask around first, for it's here that you will find the lowest prices. Take some of your books with you when buying fish so that you can check that the species you are considering are suited to the conditions in your tank and are not too aggressive or too difficult to keep. Don't be shy to ask questions as most fish keepers love to chat about their hobby and many pet shops are happy to give advice about the compatibility of the species you have in mind. Don't buy too many fish (or the most expensive ones) at your first outing and don't forget to get something for them to eat. Take a foam esky with you, to protect your bags of fish from sudden weather changes and return home with them as soon as possible.

When introducing fish into their new home, open the bag and float it in the tank, then allow about half as much aquarium water as is already in the bag to flow in. Wait for about 5 minutes and repeat the dilution. After a further 5-10 minutes, the fish will be ready to go into the tank. We prefer not to allow any of the bagged water to enter the tank but to transfer the fish gently with a net. In this way, the transfer of unwanted wastes and possible disease organisms is largely avoided. Don't worry if your tank turns cloudy after a few days as this is normal and is called new tank syndrome: it will clear up shortly, when a natural biological balance is established. However, if you were able to include some gravel or a filter from an established tank (or used Biozyme), then this is where you will benefit and the water will probably not go cloudy. Do not add too many fish too quickly as this will continue to upset the balance in your new tank.

What fish? Species that would be suitable for starting a new tank include Peppered, Bronze or most other *Corydoras* Catfish, Platies and a large range of Tetras. Buy these in schools of at least 6. Some of the best Tetras for starters are Neons, Cardinals, Penguins or Hockey-sticks and Glowlights, and *Rasboras*, such as Harlequins are also suitable. Cichlids are a bit tricky for the beginner as the choice is so large and they range from being easy to keep to those that will feast upon all the smaller kinds mentioned, however Kribensis and Keyholes are the best and safest. Remember that all the fish you buy will grow, so don't cram them.

Feeding time: It's best not to give too much food at the one session but rather, a little at a time. Remember that the fish will take a few days to get used to their new home and owner. When their appetites are back to full swing they will soon let you know how much they want. Be sure to provide food for the different levels of the tank that the various species occupy but don't overfeed. It's quite easy to tell, really, for if there is still food visible from the previous day's feeding, then you are giving too much. It's important, too, to provide a varied diet.

Early days: For the first 2 weeks you will need to keep checking that everything is operating correctly and that the fish are healthy and eating well, for this is the stage when they will be most susceptible to disease. Remove any dead fish promptly.

Timetable: After about 2 weeks you will need to begin what will soon become a routine. Water changes need not be a dreaded event if you keep to a weekly schedule. Do regular water changes of between 10 and 25%, depending on how many fish there are and how much the feeding. To make it easy to judge the amount of water to remove, place a ruler above the gravel (on the outside of the tank) and measure the depth of the water, then mark with a black permanent texta, 10 and 20% levels down from the water surface (which is usually about 1" below the top of the tank). Now when you do a water change you will know not to pass the 25% line or remove less than 10%. Use a gravel washer when siphoning out water to remove bottom debris at the same time. Water the lawn or the garden with the old water, which contains nutrients. Now replenish the tank with new water that is at about the same temperature. We are lucky in Canberra as the water supply contains no added Chloramine and needs no special treatment for changes up to 25%, except for tanks containing fry or very fussy fish. For the latter we use aged water. However, you can use a chlorine or chloramine remover, before adding to your tank and many fish keepers would recommend this.

Check that pH: This should be monitored regularly to ensure that it has not moved out of the range that suits your fish best. If your tank, for some reason, keeps turning alkaline, try adding some aquarium peat or peat extract. Acid powder can be used with caution, but only as a temporary measure. On the other hand, if the tank water becomes too acidic, even with regular water changes, then add 2-3 tablespoons of washed shell-grit, preferably to the filter medium, where it works best. The shell-grit will break down to release calcium carbonates that harden the water slightly and raise its pH. Charcoal may also be added to the filter, to adsorb organic acids and other contaminants from the water, raising its pH and removing any colour.

However, charcoal will also remove medicines and should not therefore be present during any medication of the tank. Alkaline powder can be used but again, this is only a temporary measure. Any adjustment of pH should be undertaken slowly to avoid stressing the fish. Shell-grit, peat and charcoal all need renewing from time to time.

Fish watching: Observe your fish daily to become familiar with their normal behaviour. If you notice any unusual actions, such as flicking against rocks or other ornaments, loss of appetite, or abnormal swimming motions, or if there are any noticeable external changes on the fish, such as white spots or fungus, these all indicate disease. If only one or two fish are affected, remove them to a hospital tank and treat them there. Refer to a good book for the best treatments or ask other aquarists for help. Ordinary common salt is a good standby preventative and cure medicine. At first signs of a disease add half a teaspoon of salt per gallon of water to the tank but do not do this too frequently as some fish cannot tolerate high salinities. Too much salt removes the fish's protective slime coating and is only used in extreme cases, as an individual bath treatment, for a short time only.

Temperature fluctuations can weaken fish and lead to white spot and most tropical species will not tolerate cool conditions. Stress is another main cause and if due to a bullying inmate, the culprit should be removed. Dirty water, through lack of water changes, poor filtering or inadequate maintenance can also lead to disease, as can poor diet, with insufficient variety. Fish need a range of vitamins to remain healthy and live foods are excellent for this, but be sure they are cleaned properly, so as to avoid introducing disease organisms. Always try to give your fish the conditions that are known to suit them best.

Filters will need cleaning when their output decreases noticeably but it is always advisable to reinoculate them with a small amount of the old medium, after washing the sponges well in luke-warm water. In this way the good bacteria will not be killed off completely and the filter will soon regain its biological activity. Note that sometimes canister filters need only the hoses to be cleaned.

Supply your own fish: When you are at ease with your fish keeping you may wish to try your hand at breeding them. The easiest kinds to begin with are the live bearing Guppies. These breed readily in a tank at pH 7 and 26°C, with a nice lot of bushy plant, and you need only one gravid (pregnant) female. Keep her well fed and remove her as soon as the fry appear, or she will devour most of them. Among the egg-layers, White Cloud Mountain Minnows are quite easy. They need a well planted tank at 22°C and there should be 1 or 2 males and 1 or 2 females. Leave them until fry begin to appear and remember, they will be tiny. Make sure you have enough small food to feed them.

Breeding tanks: After your first few successes you will no doubt be adding breeding tanks to your collection. If you intend to use bare breeding tanks you would do well to place between them and their supporting foam a green or black garbage bag, cut to size. Not only does this look neater but it will cut down light reflection and you will be glad you did it, if later, you try some of the more challenging species. Quite a number of these fish lay light-sensitive eggs.

Read, read, read: Once again, let me stress the importance of reading up on any fish you wish to breed. This does not imply that you must follow directions exactly, as the species may perform slightly differently under your conditions. Keep trying and note down details, particularly of successful runs, so that you can repeat them later. After all, breeding is one of the most challenging aspects of fish keeping and experimenting is half the fun. Don't expect success every time as a lot depends on how the fish feel: they have to be ready to breed. A good way to condition them is to provide live foods and they will soon

respond to that.

Finale: Well that's about as far as this article can go but for you, your ambitions and the time you can devote to this fascinating hobby will determine how far you go. There are over 8,000 known species of fresh-water fish and even though by no means all of them are available here, there will be plenty to keep you going for a long time. And if that's not enough don't forget those beautiful marines.

