FISHLORE.COM'S FRESHWATER AQUARIUM E-BOOK

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FOREWORD

Thanks for downloading FishLore.com's Freshwater Aquarium e-Book. It is comprised of many of the freshwater articles from the website. You can use it as a guide in setting up your freshwater aquarium or use it as a species reference when visiting the local fish store.

This e-Book is FREE for anyone to download and use. The cool part about making it an e-book means that I can keep it updated when we publish new articles or profiles on the website. Check the download page if you want to get the latest version. I'll be sure to include the last update date so it's easy to tell if you have the latest version.

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Please pardon any typos or grammatical errors. I've been in this document for many hours but I'm sure that some have slipped by. If you find any errors you can let me know by using the contact us form here: http://www.fishlore.com/fishforum/sendmessage.php

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You can find many different premade links to FishLore that you can copy and paste here:

If you have questions after reading through this book please join us on the FishLore forum at http://www.fishlore.com/fishforum/. Please note that our forum is moderated which means that we have rules that have to be followed such as no cursing, no flaming other members, etc. Read the forum rules here: http://www.fishlore.com/fishforum/forum-announcements-suggestions/227-fishlore-forum-rules.html

Our forum has been around for a long time now and there are a lot of great people that post on our forum. We also have a first class group of moderators that can help field forum usage questions should you have them. Be sure to thank the mods because they donate their own time to help keep the forum safe for everyone.

Thanks for reading and I hope to see you on the forum!

Mike

P.S. Keep an eye out for the FishLore.com Saltwater Aquarium and Reef Tank e-book which is coming out very soon! Stay tuned.

WHY SET UP AN AQUARIUM?

You've been to the pet store and noticed the fish tanks and thought "maybe I could do that". Guess what, you can "do that" and it's not nearly as difficult as you may think.

The tropical fish keeping hobby has come a long way over the past decade thanks in part to advances in aquarium equipment and the plethora of readily available information. There are many outstanding fish and aquarium books available as well as an abundant amount of information on the internet, forums and discussion groups. Running your own tank is way easier than it was just 10 years ago.

In the past, folks would go to the pet store and buy the tank, equipment and fish all at once not knowing they were setting themselves up for failure. They would get the aquarium set up and running, put some fish in and everything would be fine for a couple of days but then the fish would start to die. Now we know better. We know about the crucial <u>aquarium nitrogen</u> <u>cycle</u> that must take place in all new tanks. We know how to properly <u>acclimate tropical fish</u> to our tank water and how to periodically use our <u>aquarium test kits</u> to test the tank water to make sure nothing is out of whack. We have better access to fish behavior and can determine which fishes shouldn't be kept together in the same tank. The information is out there, at our fingertips, at libraries, book stores and the search engines.

So, with all this available information we can quickly come up to speed with running a tank in our home. There are many different types of aquarium setups but the most common types are freshwater, saltwater fish only and saltwater reef tanks. Here is a very brief intro:

Freshwater Aquarium

The mainstay of the hobby and the most popular setup, a <u>freshwater tank setup</u> can be a great first tank and it will give you the necessary experience needed for branching out into other types of tanks. This setup is the least expensive in terms of equipment and livestock and is not usually as demanding as the other types. There are literally hundreds of different <u>types of fish</u> available so finding a species you'll like shouldn't pose a problem. You can keep <u>live aquarium plants</u> in your tank as well. Keeping plants may require an upgrade to your lighting system and you may have to add supplements to your tank water. Freshwater aquarium plants add another dimension of beauty to a freshwater tank.

Saltwater Aquarium

Saltwater tanks are perceived to be more difficult than freshwater tanks. In times past, that statement may have been true but I don't think that is necessarily the case today. With the increasing use of live rock as the primary <u>biological filter</u> in a <u>saltwater tank setup</u>, the chances

of successfully running this type of aquarium have dramatically improved. A fish only saltwater tank equipped with live rock will be more expensive than a freshwater tank because you'll need to purchase live rock and a <u>protein skimmer</u>. <u>Marine fish</u> are also more expensive than their freshwater counterparts.

Saltwater Reef Tank

The ultimate tank setup in this hobby has to be the <u>reef tank setup</u>. It's like having a small piece of the coral reef in your living room. The emphasis is on the corals and invertebrates with a limited amount of fish. These tanks are however, more expensive to setup and maintain. Equipment such as <u>metal halide lighting</u>, protein skimmers, live rock, testing equipment, supplements, water purification units (<u>reverse osmosis and deionization</u>) and sumps drive the cost of this setup. Don't forget about the ongoing maintenance costs (electricity) as well. The livestock costs for live corals, fish and invertebrates are also very expensive. This type of tank can be very demanding when first set up because you'll need to monitor the water parameters periodically and take corrective action when necessary. Even though this is the most expensive type of setup, it can also be the most breathtaking. You should to do your homework (research) and figure out exactly what you want to accomplish before buying your first piece of reef equipment.

No matter what type of tank setup you choose, as long as you do your homework beforehand you'll enjoy this hobby. Research the equipment and livestock before purchasing them and you will prevent many headaches and keep some of that hard earned money in your wallet!

The satisfaction of watching fish in our home can be relaxing, educational and can be a great conversational piece all at the same time. Many kids are extremely fascinated with tropical fish and you can use this as a great learning tool to teach your children responsibility, biology and science. Teach them about the critical biological cycle that takes place called the Nitrogen Cycle. Teach them how to test the tank water for ammonia, nitrite, nitrate and pH. Show them the proper way to feed and care for the fish. Show them how to do water changes and maybe they can help out with this vital task required for keeping fish in our homes. Explain to them why we can't keep a <u>common pleco</u> in our 10 gallon tank. The educational opportunities abound.

If you're interested in setting up your own tank I encourage you to do some homework beforehand. Go out and purchase an aquarium book on the type of tank you're interested in, subscribe to a tropical fish magazine, browse the internet and join a tropical fish forum to increase your knowledge. This is a fun and exciting hobby that gets better all the time!

AQUARIUM TYPES

Aquariums come in many shapes and sizes. There is surely to be an aquarium type out there that will suit you. Fish tanks can be made out of glass or acrylic and typical sizes are 10, 20, 29, 30, 40, 50, 55 gallons and larger. Some are tall, some are short. Some are rectangular or hexagons and some have bowed fronts.

An acrylic aquarium is going to be lighter, stronger and more durable than a glass aquarium. But an acrylic aquarium will scratch much easier and it can be very difficult to buff out an aquarium scratch on an acrylic tank, if at all.

Generally, the bigger the tank the better it is because a larger aquarium will tend to have much more stable water parameters. For example, take a 5 gallon versus a 55 gallon tank. In the 5 gallon tank the temperature may fluctuate up to 10 degrees Fahrenheit every day whereas the temperature isn't going to fluctuate as much in the 55 gallon. Having more water will usually buy you more time to correct anything that should happen. Check out your local fish store or online for an aquarium that fits your needs.

Another important consideration for your pet fish tank will be the aquarium stand. It will need to be strong enough to hold the finished tank. Roughly, an aquarium will weigh at least 10 pounds per gallon. So a 55 gallon aquarium stand will need to be able to support 550 pounds! Don't skimp on the stand and make sure it's level and strong and make sure that the floor will be able to support the total weight of the tank!

AQUARIUM ELECTRICAL SAFETY

By Mike Owen

First published in Tank Talk, Canberra and District Aquarium Society, Australia

Courtesy: <u>Aquarticles</u>

Safety around the aquarium, electrical safety in particular, is a subject all aquarists should be concerned about. The possible fatal consequences of the combination of water and faulty electrical equipment is something we all should bear in mind. One of the basic rules of aquarium management that I have seen in several aquarium books is to turn off all electrical power to the aquarium before putting your hand in -the water. However, hands up all those who have ignored this rule; I bet there are not too many hands still down.

The amount of current needed to give a person an electric shock is surprisingly low. With a 240 volt supply, a current of only 10 milliamps through your body to earth can give a painful shock, and a current above 50 milliamps is likely to be fatal. Not very much when a 200 watt beater draws something like 800 milliamps. While the possibility of a dangerous failure in modern commercial aquarium equipment is very, very slight, nevertheless a risk still exists. I've never seen any report of a person being killed by a shock from their aquarium in Australia but I have seen a report in an English newspaper of this happening, and have vague recollections of reading that several people die each year in the U.S.A. by electric shocks from their aquariums.

If your aquarium equipment is plugged into a normal household switchboard, with standard circuit breakers, it is highly unlikely that they will cut-out in the event of a fault in the equipment leading to a possible leak to earth of the low magnitude needed to cause a bad shock. Fortunately there is a simple, but unfortunately fairly expensive, safety measure which can be taken. This is to install a CORE BALANCE EARTH LEAKAGE CIRCUIT BREAKER, or ELCB for short, into the wiring system for your aquariums.

These devices work by continually monitoring the current in both the active and neutral wires of the circuit, and if a fault develops in the circuits leading to the leakage of current to earth, then the device instantaneously breaks the circuit. They are set to break the circuit only above a certain current loss, since some home appliances such as water heaters and freezers naturally have small current losses. The cut-off level ranges from 10 milliamps to 30 milliamps, with 30 milliamps being suitable for the aquarium.

Three types of ELCB are available. The first is wired into the main switchboard of a house and can give protection to all power points in the house, not just the aquarium power point. I'm not

sure of the cost of this in Canberra, but with installation by a qualified electrician, it could be around \$200 or more.

The second is a wall mounted model, which is a straight replacement for a standard wall socket and looks very similar. Installation is straight forward and most would feel confident about doing the work themselves. The only possible complication is if the socket is part of a ring circuit with more than three wires going into the socket. If in doubt, get an electrician to do the installation. The cost of a wall mounted model is about \$80 at one of the specialist electrical shops at Fyshwick. They are rarely to be found at the general hardware stores.

The third type of ELCB are portable models. These are self-contained units which plug into a standard socket and into which you plug your aquarium equipment, similar to an extension cord. They have the advantage of being able to be used wherever needed around the house, for instance with power saws hedge trimmers etc. but are quite expensive. The only one I've seen in Canberra was over \$100. If you would require a wall mounted model to be installed by an electrician they may be worth considering, but their portability is largely wasted in an aquarium setting because it is virtually never free to use for other applications.

The choice of whether to install an ELCB or not is up to the individual. They are expensive; \$80 would buy a nice power filter, let you set up that extra breeding tank, or buy some very nice fish, but what's the point if you aren't around to enjoy it. Me, I've put off buying that Eheim filter I've had my eye on for a while!

AQUARIUM FISH CRUELTY THROUGH IGNORANCE

Courtesy: Andy Gordon of England, and Michelle Stuart of Ontario Canada

Reprinted, with permission, from their web site Fishtanksandponds.net & Aquarticles

There are many different ways to treat animals inhumanly. The easiest to detect is cruelty through violence or neglect. Putting any animal through such treatment is condemned, and rightly so, without question or hesitation. But what about animals that suffer simply because the owners don't know any better? Is that any better fate for an animal to go through? - After all, the owners didn't know they weren't providing the proper care for their animals. So often this issue is brushed aside with a shrug, saying that they really tried to care for the animals, or that they had good intentions!

Fish tanks have been around for so long that one has pretty much become a commonplace fixture in many homes. Nearly everyone can remember a time when they had a tank in the house or visited a friend who had a tank. Since fish tanks are so commonplace, a lot of people tend to underestimate the care and dedication required keeping a tank healthy and thriving. Too many people, who have never had fish, believe that fish keeping is the simplest of hobbies, just add water and go!

The most common time for fish to be placed in inadequate conditions is when hobbyists are starting up their very first tank. They are unaware of the need for cycling the tank and going slowly to allow for the required bacteria to grow in the tank, and the fish seem to die for no apparent reason. They stock the tank too quickly since they want an instant showpiece for their home.

The second most common mistake people make is to overstock their tanks. They want to see huge schools of fish living happily side by side without any room for movement, and don't know that most of the fish they purchase are juveniles that will grow to many times their current size.

Other examples of cruelty through ignorance include common mistakes like:

- Keeping fish in an unsanitary tank.
- Not treating tap water to remove chlorine.
- Not acclimatizing the fish when transferring them to a new tank.
- Adding incompatible species of fish in the same tank such as Oscars in a community tank.
- Using a tank that is too small for the fish once it is full-grown.
- Feeding an unhealthy unvaried diet.
- Little or no water changes.

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