

FishLore.com's  
Freshwater  
Aquarium 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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Everything on FishLore.com is free. Always has been, always will be. I frequently get emails from visitors asking if they can donate anything to the site to help keep it going and I always decline because there is no need for donations. We generate enough funds from the advertising on the website to keep the servers running. Our life line is the all-powerful link. We have tons of outgoing links on our forum but getting inbound links to the site seems to be near impossible these days. We appreciate any and all links that we get! Visitors to the site are what keeps it going and they will make it possible to continue to provide things like this e-book going forward.

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

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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. Check out the Saltwater and Reef Tank Book here: <http://www.fishlore.com/saltwater-aquarium-reef-tank-book.htm>

## 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 aquarium nitrogen cycle that must take place in all new tanks. We know how to properly acclimate tropical fish to our tank water and how to periodically use our aquarium test kits 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 freshwater tank setup 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 types of fish available so finding a species you'll like shouldn't pose a problem. You can keep live aquarium plants 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 biological filter in a saltwater tank setup, 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 protein skimmer. Marine fish are also more expensive than their freshwater counterparts.

### **Saltwater Reef Tank**

The ultimate tank setup in this hobby has to be the reef tank setup. 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 metal halide lighting, protein skimmers, live rock, testing equipment, supplements, water purification units (reverse osmosis and deionization) 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 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 common pleco 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!

**By Mike Owen**

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

Courtesy: [Aquarticles](#)

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!

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

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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.

- Having improper lighting for planted tanks.
- Improper water chemistry for the fish they have.
- Mixing coldwater and tropical fish in the same tank.
- Not treating harmed or diseased fish.

The easiest way to combat cruelty due to ignorance is to learn as much as you can about your tank, the fish you wish to keep, and the requirements to keep the fish healthy, and then share as much information and experiences, whether good or bad, as you can with other hobbyists. There are many different inexpensive, reliable resources available to hobbyists, so that fish should not have to suffer because people didn't know any better! In this hobby a little research goes a long way in keeping fish healthy, and in the end it will greatly increase the enjoyment people find when keeping fish.

The aquarium nitrogen cycle information presented below may be rather boring to most people, but it is absolutely essential to understand this process if you want to be successful at keeping fish!

### Steps in the Process:

1. Fish Waste & other biological processes
2. Ammonia
3. Nitrites
4. Nitrates
5. Water changes to remove nitrates and DOC

Some call it the biological cycle, the nitrification process, new tank syndrome or even the start-up cycle. They all are referring to the same cycle - The Nitrogen Cycle. The aquarium nitrogen cycle is a very important process for the establishment of beneficial bacteria in the aquarium and in the filter media that will help in the conversion of ammonia to nitrite and then the conversion of nitrite to nitrates. Check out the aquarium water chemistry page (on the left) for more information on these terms.

This process can take from 2 weeks to 2 months or longer to complete. It is vital for anyone planning on keeping aquarium fish to understand this process. Learning about this process will help you to be successful in keeping fish and it should definitely improve your chances when keeping tropical fish. The best way to monitor the nitrogen cycle is to purchase an aquarium test kit that will test for ammonia, nitrites, nitrates and ph.

Test your aquarium water every other day and write down your readings. You will first see ammonia levels rising. A few weeks or so later you should see the nitrite levels rising and the ammonia levels dropping. Finally, after a few more weeks you should see the nitrate levels rising and the nitrite levels dropping. When you no longer detect ammonia or nitrites but you can detect nitrates you can assume that it is safe to add your tropical fish.

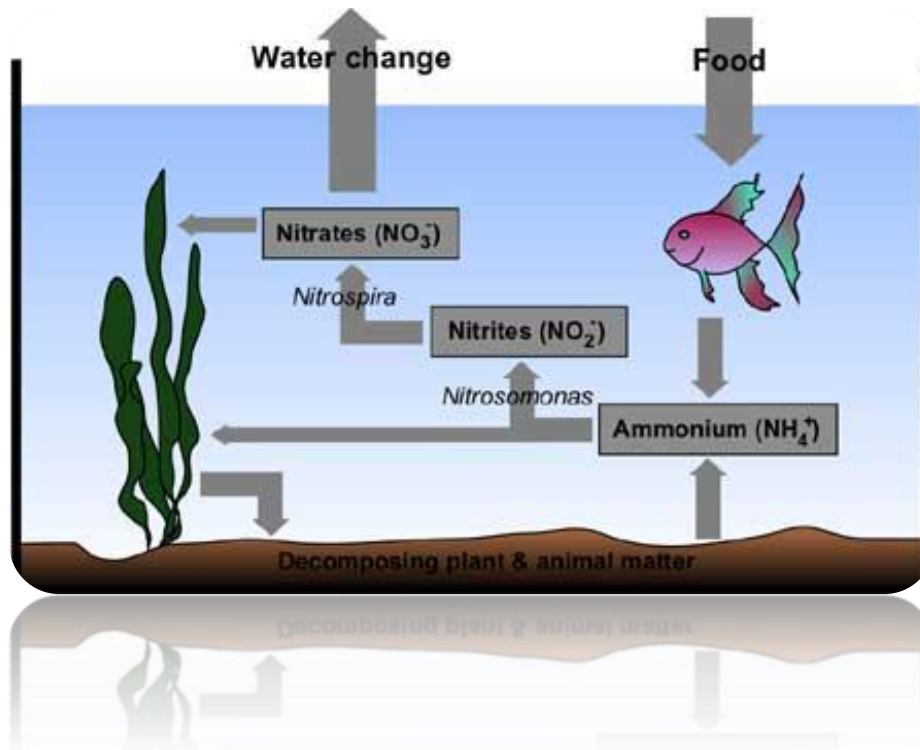


Photo Credit: Ilmari Karonen

## Nitrogen Cycle Stages

### Stage 1

Ammonia is introduced into the aquarium via tropical fish waste and uneaten food. The tropical fish waste and excess food will break down into either ionized ammonium (NH<sub>4</sub>) or un-ionized ammonia (NH<sub>3</sub>). Ammonium is not harmful to tropical fish but ammonia is. Whether the material turns into ammonium or ammonia depends on the pH level of the water. If the pH is under 7, you will have ammonium. If the pH is 7 or higher you will have ammonia.

### Stage 2

Soon, bacteria called nitrosomonas will develop and they will oxidize the ammonia in the tank, essentially eliminating it. The byproduct of ammonia oxidation is Nitrites. So we no longer have ammonia in the tank, but we now have another toxin to deal with - Nitrites. Nitrites are just as toxic to tropical fish as ammonia. If you have a test kit, you should be able to see the nitrite levels rise around the end of the first or second week.

### Stage 3

Bacteria called nitrobacter will develop and they will convert the nitrites into nitrates. Nitrates are not as harmful to tropical fish as ammonia or nitrites, but nitrate is still harmful in large amounts. The quickest way to rid your aquarium of nitrates is to perform partial water changes. Once your tank is established you will need to monitor your tank water for high nitrate levels and perform partial water changes as necessary.

There are other methods to control nitrates in aquariums besides water changes. For freshwater fish tanks, live aquarium plants will use up some of the nitrates. In saltwater fish tanks, live rock and deep sand beds can have anaerobic areas where denitrifying bacteria can breakdown nitrates into harmless nitrogen gas that escapes through the water surface of the aquarium.

## Getting The Nitrogen Cycle Started

There are two ways to get the aquarium cycle started, either with fish or without fish.

### Starting The Nitrogen Cycle With Fish

This is **not** the preferred way to get the nitrogen cycle started because the fish are being exposed to ammonia and nitrites during this process. Many fish cannot and will not make it through the cycling process. Often times the fish become stressed and fish disease starts to break out. I wonder what percentage of disease is caused by the cycling of new aquariums.

Certain species are hardier than others and seem to tolerate the start-up cycle better than others. For freshwater tanks, the zebra danio is a very hardy fish that many use to get the nitrogen cycle started. For saltwater tanks, some have reported success using damselfish to get the process started. Again, using fish to cycle is not a good idea and you may be throwing your money (on dead fish) out the window. There is a better way. Read on, young grasshopper.

### Starting The Nitrogen Cycle Fishless

There are a few different ways to get this process started. To easily get an ammonia reading from your tank water try the Seachem Ammonia Alert. It sticks inside the tank and has a circle that changes color depending on the ammonia levels in the tank.

- **Option 1:**  
Using Fish Food  
Drop in a few flakes every 12 hours. As the food decomposes it will release ammonia. You will have to continue to "feed" the tank throughout the process to keep it going.
- **Option 2:**  
Use a small piece of raw fish or a raw shrimp  
Drop a 2 inch by 1 inch chunk of raw fish or a raw shrimp into the tank. As it decomposes it will release ammonia into the tank.
- **Option 3:**  
Use 100% pure ammonia.  
Using a dropper, add 5 drops of ammonia per 10 gallons of aquarium water. If you don't get an ammonia reading with your test kit, add some more drops until you start to see an ammonia

reading. Keep track of how many drops you've used so you can repeat this process daily. Continue to dose the tank with ammonia until you start to get nitrite readings with your test kit. Once you can detect nitrites you should only add 3 drops of ammonia per 10 gallons of aquarium water, or if you added more drops originally to get an ammonia reading cut the amount of drops used in half. Continue this process daily until you get nitrate readings with your test kit. Do a 30% water change and your tank is ready.

- **Option 4:**

Use gravel and/or filter media from an established and cycled tank

This is the best and fastest way to go. This will seed the tank with all of the necessary bacteria for the nitrogen cycle. "Feed" the tank daily with flake food until you are getting nitrate readings. Depending on how fast you were able to get the gravel and filter media into your tank, you may be getting nitrate readings in only a day or two. There are some drawbacks to this method. Ask your source if they have recently used any copper medications in the tank. If they have and you are planning to have invertebrates in the tank you should probably not use this method. Invertebrates will not tolerate copper. Get a copper test kit to determine if it's safe to use.

- **Option 5:**

Using live rock in Saltwater Tanks

The use of live rock in saltwater tanks has really taken off over the past few years. The reason for this is because it is one of the best forms of biological filtration available for saltwater tanks. The shape the rock is in when you get it will determine how long the nitrogen cycle will take. See step 7 on the saltwater setup page for more information on live rock.

- **Option 6:**

Use Colonize by Dr. Foster and Smith - claims to colonize your water with the necessary bacteria needed to get the cycle going along with detoxifying ammonia so it doesn't harm the fish. To be used at the start of the tank setup and whenever you add new fish to your tank.

- Another bacteria culture product is Tetra SafeStart. People have reported success on the forum with using Tetra SafeStart. Do a quick search on the forum for other members' input.
- Use Instant Ocean BIO-Spira for Saltwater Tanks made by Marineland (the freshwater version may have been discontinued). This product claims to contain some patent pending species of nitrifying bacteria that will cycle your tank in 24 hours. Some of the FishLore forum members have tried it and it sounds like it is legitimate. It is kind of expensive, but if you already have fish in your tank and they are suffering through the cycle, you may want to check this stuff out. 1 ounce of this product is supposed to treat a 30 gallon freshwater tank. There are both

freshwater and saltwater versions of Bio-spira. Please let us know if you use this and if it works for you by submitting comments below.

Once the cycle has started only add one or two fish at a time. Wait a couple of weeks before adding more fish. This will give your tank the time it needs to catch up with the increased bio-load.

### Speeding Up the Cycling Process

There are things you can do to speed along the process of cycling your aquarium.

- Increase the temperature of your aquarium water to 80°F-82°F (27°C-28°C)
- Get some beneficial bacteria colonies. Borrow some gravel from an established and cycled aquarium. If you have another tank with an extra filter you can use it. If you have a really nice friend with an established and cycled aquarium, ask if you can have one of their used filter media. It will be loaded with the good bacteria that we are looking for.
- There are products on the market that claim to introduce the beneficial bacteria. For more information, check out products like Bio-spira and Tetra SafeStart in option 6 above. There are many more products entering the market that contain the beneficial bacteria necessary to seed your tank. Between live rock (for saltwater aquariums) and the bottled bacteria being readily available, there really is no excuse to make fish suffer through a cycle.



# AQUARIUM FILTER AND FISH TANK FILTRATION

Your aquarium filter helps increase the quality of the water in your fish tank. Most think of mechanical filtration when it comes to aquarium filters but as you will soon see, there are some other filter types that you need to know about.

## Mechanical, Biological & Chemical Aquarium Filters

There are three types of aquarium filtration:

Mechanical Filtration

Biological Filtration

Chemical Filtration

### Mechanical Aquarium Filtration

Mechanical filtration removes the free floating particles from the aquarium water. The siphoning action of a power filter that hangs on the back of an aquarium does a decent job of this type of filtration.

### Biological Aquarium Filtration

Biological filtration is the most important aquarium filtration type because it deals with the growing of the good bacteria in your aquarium filter. The good bacteria is the bacteria that converts ammonia to nitrite and then converts nitrite into nitrate. This establishment of bacteria is essential to your success with keeping tropical fish. For more information please read about the Nitrogen Cycle.

Ammonia -> Nitrite -> Nitrate

### Chemical Aquarium Filtration

Chemical filtration involves removing the dissolved wastes from the aquarium water. Often times this is accomplished through the use of activated carbon in the aquarium filter. Activated carbon can also help to reduce odors. Many people dislike using carbon in their tanks due to the fact that the carbon is useful for only a short period and then must be replaced. If it doesn't

get replaced in a timely manner the very wastes that it removed can be released from the carbon back into the aquarium.

Zeolites can also be used in chemical filtration. Zeolite removes ammonia from your aquarium water and can be a fish life saver if you have high ammonia levels. Many first time fish keepers mistakenly add too many fish to a new aquarium before it has cycled and experience the disappointing loss of their fish. Using zeolite during the cycling process in your aquarium filter can help prevent this from happening but it has the side effect of lengthening the time it takes to complete the aquarium nitrogen cycle.

## Types of Aquarium Filters

### Corner Filter

The corner filter sits inside the aquarium in one of the corners or even sticks on to the glass. It is very low-tech but a corner aquarium filter can be used successfully for mechanical, chemical and biological filtration. The key is not to change out the entire filter material when performing maintenance. Only change out the carbon and part of the filter material. Corner filters require frequent maintenance and are only used in very small tanks these days if at all.

### Undergravel Filter (UGF)

Undergravel filters are commonly found with beginner's aquarium kits and the undergravel filter has been around for a long time. Undergravel aquarium filters can provide good mechanical filtration because it forces the water down through the aquarium gravel where particles are trapped. You can then use an aquarium vacuum to clean the detritus.

Biological filtration occurs in the gravel because of the slow flow of water through it. The water is then pushed up through the uplift tubes in the back of the tank where chemical filtration takes place with the activated carbon in the top of the tubes.

The problem with this type of aquarium filter stems from the fact that it can be difficult to thoroughly vacuum the gravel and harmful gas pockets can form under the gravel plates thereby harming your tropical fish. I personally don't use undergravel filters because of this reason. There's a lot of controversy surrounding the use of undergravel filtration. Check out The Undergravel Filter Controversy for more on this subject. Many long time fishkeepers still use

the undergravel filter and swear by it. If you do use an undergravel filter try to regularly vacuum your gravel to prevent the harmful gasses from forming.

## Sponge Filter



Sponge filters can provide a cheap and effective form of biological filtration. Water flows through the airlift tube allowing a colony of beneficial bacteria to grow in the sponge. There is no chemical filtration with this method and the mechanical filtration is very weak. You must do frequent water changes if this is your only form of filtration. Many breeders use the sponge filter in conjunction with a bare bottom tank. After feeding their young fish they will siphon any remaining food to prevent the water quality from deteriorating. Frequent water changes are performed because it aids in the rapid growth of the young fish. Fish breeders don't have to worry about mechanical or chemical filtration as much because they are performing frequent water changes.

## Power Filter

The power filter is probably the most popular filter type for a variety of reasons. They are easy to use and clean and they can be an effective means of mechanical, chemical and biological filtration! The drawback to using power filters is that it is very **inefficient** because of its design. The intake tube for the dirty aquarium water is directly below the lip of the outflowing filtered water. Does this make any sense? Not to me either.

More aquarium kits come with a power filter than any other type of aquarium filter. Try to get a power filter that contains two filter media slots. With two filter slots you can change out one side of the filter and then a few weeks later change out the other side. If you change out the entire set of media cartridges at once you run the risk of having to re-cycle or mini-cycle because you've tossed out much of the beneficial bacteria.

## Canister Filter

Canister filters are on the higher end of the price scale but they are pricey for a reason. They work very well. Often there are multiple trays for a canister filter with each tray providing a type of filtration. The first tray could be a sponge that filters (mechanical and biological) the large

particles. The second tray could be filled with zeolite that removes ammonia from the water (chemical). The third tray could be activated carbon which would further filter (chemical) the water. Most canister filters push the water from the bottom of the canister to the top but some work just the opposite. Find out which way yours works to get the most out of the canister filter. This is our personal choice of aquarium filter on most of our freshwater fish tanks.

## Protein Skimmer

Protein skimmer models come in a few different styles. There are those made for in tank use (Visi Jet PS, Slim Skim Protein Skimmer), protein skimmers that hang on the back of the tank and those designed for use in a sump.

Those designed for in tank use are usually less desirable because they don't seem to work as well as the other types. Try to get one that hangs on the back of the tank such as the AquaC Remora Protein Skimmer or one for your sump. Also, make sure that you can easily get to and remove the collection cup for daily or weekly cleaning.

This piece of equipment is usually very pricey but it is a critical piece of equipment for saltwater aquarium beginners nonetheless. They are virtually useless in freshwater tanks.

In saltwater tanks, the skimmer will remove dissolved organic material from the water and anyone who has used one can tell you about the smelly brown gunk that gets pulled from the water. In the past, saltwater aquarium keepers would sometimes experience a complete die off of the fish in their tanks. Many believe that it was due to the amount of dissolved organics in the water and by using a protein skimmer they have drastically reduced the chances of this happening. Skimmers completely remove proteins into a collection cup that can be emptied on a regular basis before they break down in the aquarium leading to algae blooms and DOC buildup. Protein skimmers also help increase the dissolved oxygen levels in your saltwater aquarium.

Since this is an expensive piece of equipment you will want to shop around and research the various models out there. It's been our experience that you usually get what you pay for when it comes to skimmers. Get the biggest and best rated skimmer that you can afford.

## Powerhead

A powerhead is considered part of the filtration system? Yes, indeed. In freshwater aquariums, powerheads are used for water movement as well as in conjunction with an undergravel filter system. If you're running a system where air stones drive the water flow in your undergravel filter, consider using a powerhead in one of the uplift tubes. The powerhead should help generate much better flow through the UGF, resulting in a more efficient UGF. Many come with a tube that is connected to the powerhead that hangs on the outside of the tank with an air flow valve. This allows you to mix air with the water being pushed out of the powerhead. That can help increase surface agitation and aeration in your tank.

Saltwater hobbyists frequently use multiple powerheads situated in a way that allows them to control the flow of the water in the tank or even better, to create turbulent water flows. Saltwater tanks usually require more water movement than freshwater tanks. Constant water movement prevents dead zones in a tank and keeps uneaten food suspended in the water column so that the fish can eat it or the mechanical filtration and/or protein skimmer can get rid of it.

## Refugium

A refugium is an external tank, usually smaller, that is used to house smaller fish and invertebrates for cultivation and/or feeding the fish in the display tank. It can be connected to the main tank and is sometimes apart of or separate from the sump. You can even get a hang on the back of the tank type refugiums or DIY a power filter to use as a refugium. See the DIY refugium setup for more information. A refugium provides isolation for those more delicate specimens that can easily and quickly become food for the larger fish in the display tank.

## Aquarium Sump

A sump is also an external tank but one that has water lines connected to the display tank. They can be any size but are often smaller and placed hidden below the main tank in the cabinetry. Sumps can provide many benefits for you. They can help with nutrient export by allowing certain macro algae types (chaetomorpha, for example) to grow uninterrupted from grazing by your herbivores in the display tank. Sumps also increase the total amount of water in the system. For instance, if your aquarium is 55 gallons and your sump is 20 gallons, you essentially have a 75 gallon tank.

This extra tank also gives you the ability to hide ugly equipment (like filters and protein skimmers) that could diminish the look of the display tank. Many saltwater hobbyists add any saltwater supplements to the sump instead of the main tank. Supplements such as Iodine, strontium, kalkwasser (lime water) dosing systems and others are often placed into or connected to the sump. Is a sump absolutely necessary for a saltwater aquarium? No, they are not mandatory but they can definitely help in keeping your system (water parameters) stable and they can help hide equipment under the display in the cabinet.

This freshwater aquarium setup article explains how to set up a basic freshwater fish tank. We'll start with a short list of the equipment you'll need and then give you a step by step guide on setting up or starting your first freshwater fish tank.

### Equipment you will need:

- Aquarium
- Aquarium gravel
- Aquarium filter
- Replacement filter media
- Heater
- Other decorations (such as fake or real plants)
- Aquarium test kits to test water parameters and monitor the infamous aquarium nitrogen cycle
- Fish food
- Aquarium vacuum
- Fish net
- Aquarium Glass Scrubber
- 5-gallon bucket
- Pasta strainer

### STEP 1: Realize the responsibility involved.

Learning how to set up a fish tank is not all that difficult, but there are some steps you should follow for a freshwater aquarium setup. First, you must realize a few things about an aquarium setup. A tropical fish tank is just like having a dog or a cat when it comes to the amount of effort on your part. In order to have a successful freshwater tropical fish tank you will have to work at it.

Once a week, or at most once every two weeks, you will need to perform some kind of maintenance on the tank. Most of the time you will be performing water changes. You will also have to feed your fish at least once a day. Setting up and running a fish tank does cost money. There are recurring expenses such as replacing filter media, buying food, etc. Check out

the [Freshwater vs. Saltwater Aquarium](#) page to get an idea of the setup costs involved. If you are up to the challenge, please proceed!

### **STEP 2: Decide on aquarium size.**

It's a good idea to have in mind what kind of fish you want to keep in your freshwater aquarium setup before you purchase an aquarium. Some fish only grow to be an inch or two, whereas other types of tropical fish can grow 12 or 13 inches or more in length! Knowing what kind of fish you want will help you decide the size of the tank they will need. If this is your first time with an aquarium, it may be a good idea to start with a 10 or 20 gallon aquarium setup for now and stock it with some smaller and hardier species.

### **STEP 3: Decide on the aquarium's location.**

Place your freshwater aquarium setup in an area where the light and temperature of the tank won't be affected by external sources such as windows and heater vents. Sunlight that enters the room through an unshaded window could affect the temperature of your tank. This could also lead to [green algae](#) problems for your tank down the road. You will want to place your aquarium on a stand that will be able to hold its total weight. You also want to be sure that the floor is able to support the total weight of the aquarium and stand. A good rule of thumb for determining the total weight of a full aquarium is 10 pounds per gallon of water. For example, a 55-gallon tank will weigh approximately 550 pounds when filled with water!

### **STEP 4: Buy your aquarium and equipment.**

Now is a good time to decide on the type of aquarium filter you will want to use. You will also need to purchase a heater capable of heating the freshwater aquarium setup size you have. Buy the gravel, plants, a power strip and other decorations. A good rule of thumb for the amount of gravel that you will need is 1 to 1.5 pounds of gravel per gallon of water.

### **STEP 5: Set up your aquarium and stand.**

Wash out your tank with water only! Do not use soap or detergents. Soap residue left behind will be harmful for your tropical fish. If you are going to use an under gravel filter (not recommended) now would be the time to set it up as well.

### **STEP 6: Wash Gravel, plants and decorations.**

Be sure to wash the gravel thoroughly before adding it to your tank. An easy way to do this is to put some of the rocks in a pasta strainer and wash them out in your bath tub. Then place the clean gravel in a clean 5-gallon bucket for transport to the aquarium. After adding the gravel you can place your plants and decorations.

### **STEP 7: Add water to the aquarium.**

To avoid messing up your gravel and plants, you can place a plate or saucer in the middle of



your aquarium and direct the water flow onto the plate. Use room temperature water when filling. To remove the chlorine and chloramine, use something like Tetra AquaSafe for Aquariums. Don't completely fill up the aquarium until you are sure of the layout of your decorations. Otherwise, when you place your arm in to move stuff around water is going to spill over. Doh!

### **STEP 8: Set up equipment.**

Install your heater but don't plug it in until the thermostat in the heater has adjusted to the water temperature. This usually takes about 15 minutes or so. Hook up your filter and any other equipment you have, then top off the aquarium water in your freshwater aquarium setup to just under the hood lip. Place your hood and tank light on the aquarium and then check your power cords to be sure that they are free of water. I would also recommend using a drip loop on all of the power cords to be extra cautious. For more information on safety, read this great article on aquarium electrical safety. Plug all of the equipment into a power strip and then "turn on" the aquarium.

### **STEP 9. Wait, wait, wait and then wait some more.**

I know, you want to add some fish. But, in order to do this right you must wait until your aquarium has cycled before adding any fish. There are ways of speeding up this process. Check out the nitrogen cycle page to learn more about starting the nitrogen cycle and how to speed it up. If you must use fish to cycle, try to get a hardier species like the zebra danio or cherry barb. You may notice your fish tank cycle kicking in gear if you start to get some white cloudy aquarium water after a few days.

### **STEP 10. Add tropical fish.**

Only add one or two fish at a time. Adding a couple fish at a time gives your filtration system the time needed to take on the increased biological load that the new fish introduce. When you bring the fish home let the bag float in the tank for about 15 minutes so that the fish can become acclimated to the temperature and pH of the aquarium water. After 5 minutes of floating the bag you should add some of the aquarium water to the bag so that the fish can become acclimated to the pH level in the aquarium. This will help reduce the amount of stress imposed on the fish. Stressed fish often leads to dead or diseased fish! Don't feed your fish on the first day. They probably wouldn't eat any food on the first day anyway. Let them get acquainted with their new home.

If you're interested in some good and hardy first fish, please read the Good First Tropical Fish article.

### **STEP 11. Get ready for regular maintenance.**

Be prepared to spend some time once every week or two to clean your tank. Performing regular water changes will reduce the nitrate levels and keep your tropical fish happy and healthy.

As you can see, the steps for how to set up a fish tank are not that complex and hopefully you now have your aquarium setup and running! Have fun, take care of and enjoy your fish!



## KEEPING AQUARIUM PLANTS BY SOMEONE WHO HAS BEEN LUCKY KEEPING AQUARIUM PLANTS

By Al Ridley

*First published in the newsletter of The Kitchener-Waterloo Aquarium Society, Canada*

Courtesy: [Aqarticles](#)

I was surprised at the number of people that approached me last meeting about plants. I have always enjoyed keeping them as have several of my hobbyist friends but there never seemed to be much passion with the exception of a couple of people. In this article I will tell you a little about keeping and growing plants successfully, or at least what makes it successful for me.

First of all, let's discuss the need for plants in the aquarium. An aquarium without plants is like a home without furniture. It is livable - but ugly, uncomfortable and inefficient. Live plants aid in displaying fish giving them shelter and security. They provide shelter for baby fish, shy fish, weak fish and females giving birth. They serve as food for vegetarian fish. They help prevent green water by competing with the algae for nutrients in the water. Plants absorb carbon dioxide and wastes and add oxygen to the water. They increase the surface area for algae, tiny worms, rotifers and protozoa to grow and in turn provide live food for the fish in the tank. And you thought that they just looked nice.

I prefer to pot most of my plants. The method is very simple and does not take a lot of time or effort. First you need some sort of pot. This could be the plastic pots that your garden plants come in, yoghurt containers, the bottom cut off a plastic pop bottle or small clay pots that you can buy at most nurseries. If it is a plastic container, make sure that it is not toxic to your plants or fish. Next get a bucket and add some water to it. Into the bucket add some potting soil. I prefer to use Hillview Potting Soil as I have found that it is pure soil with nothing added. The reason for mixing the soil and water together first is that if you do not saturate the soil and drop the pot into the aquarium, you take the chance of the air in the soil exploding to the surface and making a real mess of the aquarium. Believe me when I say that it can be very frustrating if you rush the job and end up with a big mess. It has happened to me too many time to count. Once the soil is moist (not like soup, more like Play Doh), fill your potting container 2/3rds full of soil. Take your finger and push it into the soil to create a small planting hole. Take your plant and carefully insert the root system into the hole. Carefully fill the hole from the sides, then add aquarium gravel to top up the container. Gently pull the plant upward until the crown of the root is just visible at the gravel surface. I usually have a bucket of aquarium water close by so that I can now submerge the potted plant for a few minutes prior to adding it to the aquarium. This will allow any trapped air to escape and possibly prevent the grief that I was talking about earlier. Now you can place the

potted plant into the aquarium and enjoy. The potting soil will give the plant that extra goodness and it shouldn't be too long before the plant begins to thrive and propagate.

What do I like about potting my plants? I guess the biggest thing is that like most plants, they do better if you leave them alone. Potted plants can be moved around easily without disturbing the root system. I have a *Cryptocoryne wendtii* that has been potted for almost four years now. It goes through stages of fullness and dying back but always seems to do well. There will come a time very shortly that I will remove the plant, separate the runners and replant it in many other containers. Once the pot becomes root bound (you will see the roots growing upwards out of the pot), the plant needs to be repotted.

Lighting is the most important prerequisite for successful plant growth. I have heard many different opinions on how much light is needed but my rule of thumb is one and a half watts per gallon. Most of my tanks are on homemade stands that have the double four-foot fluorescent strip over them. I have two aquariums that are on their own stands, My 180 gallon aquarium has two, double four foot fluorescent strips (160 watts) and my 50 gallon has one, double four foot fluorescent strip (80 watts). I use the regular Cool White tubes that you can buy relatively inexpensively at most hardware stores, along with the Plant and Aquarium tubes that sell for around \$6.00 at the same stores. Most store bought canopies are not capable of providing enough light to keep most aquarium plants healthy so be sure to ask your store dealer for suggestions if keeping plants is your focus.

I have also experimented with different types of lighting. I have had good success with both compact fluorescent bulbs and par 20, 50-watt halogen bulbs. Don't be afraid to try different light sources. Plants will recover very nicely even if they look rough.

Pruning your plants will also help them to grow healthy and strong. Carefully remove dead or dying leaves and any leaves that are damaged or have holes in them. The plant uses a lot of energy to try and repair these leaves, energy that could be used to produce new, lush growth.

If your goal is to keep a natural aquarium, live plants are a must. If you just want to have a nicely decorated aquarium, live plants can be used with plastic plants and rocks to beautifully aquascape your aquarium. Remember that the key is to be patient and to provide the right conditions for the plants that you are keeping.

### Do I Need A Quarantine Tank?

Ahhh, yes, the often dismissed but very necessary part of the tropical fish hobby, the infamous quarantine tank. Do you really need one to be successful in this hobby?

For freshwater fish you may be able to get by without having a quarantine tank. Freshwater fish are generally more suited to captivity because they are usually tank raised and don't seem to break out in disease as readily as their saltwater counterparts. However, if newly acquired fish do come down with something such as ich (ick) or velvet, you will surely wish that you had one ready to go. One newly bought fish that is introduced to your main tank can easily wipe out the **entire tank population**. Better safe than sorry, right?

For saltwater aquarium keepers, I would say that you **definitely** need a quarantine tank (sometimes called a hospital tank). Marine specimens are mostly wild caught and not used to being kept in captivity. Their journey to a dealer's tank is usually much longer and much more stressful for them. Stressed out fish will usually come down with some kind of disease if they don't simply die from the whole ordeal. Saltwater fish keepers will usually have other things in the main display tank such as invertebrates and live rock that they don't want to expose to the harsh medicines necessary to treat one or two fish. Some medicines can wipe out all of the invertebrates in a tank, so be sure to research any medicine before using it in your tank.

### Quarantine Tank Setup

You don't need to go all out here. A simple tank size of 10 - 20 gallons will suffice for most people. If you have larger fish, then obviously you want to get a bigger quarantine tank. All you really need is a bare bones setup with the following equipment:

- Some type of filtration (a hang on the back of the tank power filter will work, just use filter floss without the carbon since carbon will remove medication from the water, being counterproductive)
- Heater
- A powerhead and/or an air stone for increased surface agitation
- Aquarium test kits for pH, ammonia, nitrite and nitrate
- Fish Net - don't use the same net for your main tank

Fill the quarantine tank with water from the main tank and then turn everything on in the quarantine tank.

## Freshwater Fish Quarantine Tank

For newly acquired freshwater fish you will want to acclimate the fish to the water in the quarantine tank and monitor them very closely for a period of two to three weeks. Monitor the water parameters with your test kits and check for signs of parasites or bacterial infections.

If the newly acquired fish does come down with something you will need to use the appropriate medication and you will need to keep them in quarantine for a further two weeks to make sure that you have indeed treated them effectively. If after a few weeks no problems develop, you can then acclimate them to the main tank water and then introduce them.

If a fish comes down with something while in your main tank, just net them and put them into the quarantine tank. There should be no need to acclimate them because you used water from your main tank. If you didn't use water from the main tank you will need to acclimate them to the quarantine tank water. Diagnose the problem / disease and treat appropriately. After the disease clears up you will still want to keep the fish in quarantine for a week or so monitoring the water parameters with your test kits the whole time.

## Conclusion

Freshwater hobbyists may get away with not using a quarantine tank, but saltwater hobbyists would be crazy not using one. Save yourself some money, headaches and especially the fish by having a quarantine tank. The fish in your main tank will thank you for it.

This article presents information on how to acclimate fish and invertebrates to your aquarium.

So you've went out and bought some fish and the store told you to acclimate the fish by floating the bag in the tank for 15 minutes and then release them into your aquarium. Right? Wrong! The only thing floating the bag accomplishes is that it brings the water in the bag closer to the temperature of the water in your tank. We need to be concerned about more than just temperature. The aquarium water chemistry is just as important as the temperature when it comes to acclimating fish.

Don't be afraid to ask the fish clerk to test the store's tank water for you. They shouldn't mind testing their water right in front of you. They're trying to sell fish right? Ask them for, at minimum, the pH, ammonia, nitrite and nitrate readings. When you get home, test your own water to see how much the two sets of results differ. This can provide you with some insight into how slowly and for how long you should acclimate your fish.

There are a few different recommended methods for how to acclimate fish to your aquarium and we'll talk about each of these methods.

**The most common tropical fish acclimation methods are:**

- The Floating Bag Method
- The Bucket Method
- The Drip Method

### **The Floating Bag Method**

This is probably the most common fish acclimation method and it works well. You just need to be careful when floating a bag full of unknown water in your tank. Ideally, you're floating the bag in a previously setup quarantine tank but, sadly, many new hobbyists don't use a quarantine tank. After you've been in the hobby for a while and experience any sort of fish disease outbreak you'll soon come to realize the importance of a simple quarantine tank.

After you leave the fish store you will want to go straight home to avoid ammonia accumulating in the bag (in the form of fish waste). Once you get home, open the top of the bag and remove about 25% of the water from the bag. Replace this water with the same amount of water from your tank. Float the bag in your tank and bring down the hood opening on the open end of the bag to help keep the bag secure. Every 10 minutes add about 1 measuring cup (use less if the bag is smaller) of your tank water to the bag. Repeat this process for about an hour. After an

hour has passed use a small net to get the fish out of the bag and gently place the fish into your tank. The main idea here is to slowly get the fish used to your tank water (acclimated). Do not dump the bag water into your tank! If you do, you risk exposing your tank to any parasites or diseases that were in the dealer's tanks.

Some fish may be difficult to net while in the bag and you don't want to damage the fish while trying to net them. If you're having difficulty netting the fish, get a large bowl (large salad bowl works well) and carefully pour the bag water into the net, allowing the bowl to catch the water. You could bypass the bowl altogether and do it over a sink but make sure that the drain plug is in place just in case you miss the fish with the net.

By slowly adding small amounts of water from the tank we are **slowly** acclimating the fish.

### **The Bucket Method**

This fish acclimation method is basically the same as the floating bag method, but instead of floating the bag in the tank you're putting the bag inside a **clean** bucket instead. The bucket method is better than the floating bag method because you don't have to worry about any of the bag water entering your tank.

Open the top of the bag and remove about 25% of the water from the bag. Replace this water with the same amount of water from your tank. Every 10 minutes add about 1 measuring cup of water to the bag. Repeat this process for about an hour. After an hour has passed use a small net to get the fish out of the bag and gently place the fish into your tank.

### **The Drip Method**

The drip acclimation method is recommended for most saltwater fish and invertebrates because they can be more sensitive to pH, specific gravity and other water chemistry changes.

To do the drip method you're going to need a bucket, a vegetable clip with a suction cup for holding the tube in the tank and a length of air pump tubing that is long enough to extend from your tank to the bucket. Place one end of the tube into the veggie clip and then place the veggie clip into your tank. Tie a knot in the tubing to regulate the amount of water flow coming out of your tank. Get the siphon going and place the other end of the tubing into the bag in the bucket. You'll want a slow drip, drip, drip going. Aim for drips every one to two seconds. If you're having troubles using the knot to regulate the drip rate, any type of strong clip should work. Vice-grips (locking pliers) or c-clamps would work as well.

How long you do the drip method depends on what your acclimating to your fish tank. If you're doing this method for most freshwater species you should be ok doing it for an hour or so before introducing the fish to your tank. If you're doing this method on a saltwater invertebrate



you may want to take 2 or 3 hours for this acclimation procedure. If you have a good pet shop and you trust their advice, ask for and follow their recommendations on the amount of time needed for acclimation.

Acclimating new fish to your aquarium is a critical step and should not be taken lightly. Getting into the habit of using proper acclimation methods is a good way to ensure your long-term success in this wonderful hobby!

Time for vacation! You've been working hard all year long and it's finally time for that well deserved vacation. Ah, just to think about it gives me the vacation fever. The time is drawing near and you suddenly realize - what the heck am I going to do about the aquarium and fish care? Who's going to feed the fish? What do I need to do to get my fish tank ready before I leave on my trip? There are several things to keep in mind and we'll try to help you get things in order before you leave so you can have a stress free and relaxing vacation not worrying about your fish and your aquarium!

### What about feeding the fish?

Fish can go for several weeks without food. Some believe they can go for 3 or more weeks even. Yes, this is true believe it or not and your fish will be fine while you're away. Your tank may even look cleaner when you get home from vacation since there should be less wastes in the water from the lack of fish food entering the aquarium and less wastes being produced from fish eating that fish food.

If you just can't stand the thought of your fish not eating for the amount of time you'll be gone, invest in an automatic fish feeder. These fish food dispensers are relatively inexpensive and they can actually be put into full time use, even when you are at home. You can fill them with a mix of tropical fish flakes (or other flake or pellet foods, depending on the fish you keep) and it should be several weeks before you need to refill the food container. Most are fully adjustable (you can release as little or as much food as allowed), operate on batteries and will easily attach to the top of the tank.

Another option is to use one of those plastic pill boxes that are composed of small boxes corresponding to the day of the week. You put in the amount of food that day's container that you'd like for your friend, family member or neighbor to give to your fish and then you don't have to worry about them overfeeding and polluting the aquarium water.

Try to do a partial water change right before you leave for vacation. This accomplishes a couple of things. The fish will get some good clean water, which should lower their stress levels and should help keep them healthy in your absence. This also gets the water level topped off so you may not have to worry about a low water level in the tank, but it depends on the rate of evaporation of course.

Rinse out the aquarium filter media, or replace half of it. A clogged filter shouldn't pose a problem since many filters (especially power filters) have an alternate path for the water to return to the tank should the filter become clogged.

You may be concerned about what to do with the aquarium lighting while you're gone. Should I leave it on or leave it off? There is a very simple solution here... The aquarium lighting can easily be turned on and off automatically using an aquarium light timer. If you're keeping freshwater plants or saltwater corals in a reef tank or macro algae in your refugium, you really should have a light timer anyway so that your plants and corals receive adequate amounts of aquarium light.

We try to go on vacation at least once a year (if we're lucky) and we have a neighbor come over several times a day to let our dog out. They have a dog too and we do this favor for each other when we go out of town. It really is extremely beneficial to have a good neighbor you can trust. While they are letting the dog out, I just ask them to check out the aquariums to make sure nothing is leaking and that nothing looks out of the ordinary. I have asked them to rinse out a protein skimmer collection cup before while I was away. If you've never seen a full cup of skimmer gunk, it can be very dark colored, yucky and smelly. They did it for me. I guess I really do have some good neighbors.

Make sure you give the fish sitter a phone number to reach you at while on vacation just in case of an emergency with your fish or tank. A leak could develop, the heater could stick in the on position leading to a rise in temperature, the automatic water top off system could stick in the on position, etc. Remember Murphy's Law here - "Whatever can go wrong, will go wrong at the worst possible time". Write down a small list of tasks you'd like for them to do. Keep it short and don't put anything that is not absolutely essential. Here is a sample aquarium list of things you could ask your fish sitter to take care of:

- Feed the fish daily from that day's slot in the pill box - just that amount and no more please.
- Look at the temperature of the tank and if it's above 84 degrees F, call me.
- Quickly look around the base of the tank and on the floor in the immediate vicinity and inspect for leaking tank water.
- Dump out the contents of the protein skimmer collection cup (saltwater tanks only).
- Thank you for doing this for me while I'm on vacation - I really appreciate it!

Invite the fish sitter over a day or two before you leave and walk them through your list. Show them exactly how to do the various tasks. Don't expect them to know what a protein skimmer collection is or looks like! Show them exactly how to put the food in the water and exactly how to empty the collection cup, etc.

### **What if I don't have someone to come over?**

If you're only going to be away for a week, your fish should be fine without food as mentioned above. If you have a saltwater aquarium you may need to adjust the skimmer collection cup so that it doesn't collect as much since you won't be there to empty it. If you're going to be away

for a longer period of time, than say two weeks, you will be really risking it not having someone come over. This is from a water evaporation and feeding standpoint. Although you're fish should be ok from a food standpoint, your tank water may not be in the best shape after two weeks without your care.

So, plan ahead, take proper pre-cautions and show the fish sitter exactly what needs to be done and rest easy knowing that your fish will be fine. Have fun on vacation and we'll see you when you get back!

Aquarium Algae Control - So you have had your aquarium set up for some time now and you notice aquarium algae growing on the glass, rocks and ornaments in the tank. Why is this happening and what are some of the methods we can use to control aquarium algae growth in the aquarium?

First, aquarium algae is not necessarily a bad thing. Algae grows very easily when given the right conditions and some day we all may be singing the praises of algae. There is research going on even as you read this article for using algae as an alternative energy source. Cool stuff indeed. But an abundance of algae growth in the aquarium usually means that something is out of whack. Overstocking, not performing enough partial water changes, overfeeding or feeding improperly, not changing out filter cartridges and not using pure water are usually the prime suspects.

Once aquarium algae starts to overgrow plants, corals and decorations it does make the tank look dirty and can distract from the beauty of your aquarium. Let's talk about the things aquarium algae needs to grow and how to eliminate or reduce these things so we are not constantly scrubbing the tank walls and having to clean the tank instead of viewing our fish, plants and inverts! You can use the info in this algae control article for both [freshwater aquarium setups](#) and [saltwater aquarium setups](#).

### Phosphate

Get a Phosphate Test Kit. This might be considered one of the most important nutrients for many kinds of aquarium algae growth. Phosphate (PO<sub>4</sub>) can enter the aquarium from tap water, fish food and supplements. One of the first things you should look at is how much you are feeding the tank. Are you overfeeding? Only give your fish as much food as they will eat in a minute or two. Are you defrosting and draining the juice from the frozen foods you use? These juices could be loaded with phosphates. Are you using food that are low in phosphates? Test them to see for yourself. At minimum, use a bowl to feed frozen foods and tilt the bowl at an angle so the juices drain to the low side and then spoon feed the chunks to the fish. Dispose of the frozen fish food juices down the drain.



Activated carbon should be mentioned here too. Some brands have been reported to leach phosphates into the tank. Place a few pieces of activated carbon and pure water into a test vial, wait about 20 minutes to an hour and then test the water for phosphates. If that brand of carbon leaches phosphates try a different brand. Replace activated carbon on a regular basis, like every couple of weeks or so.

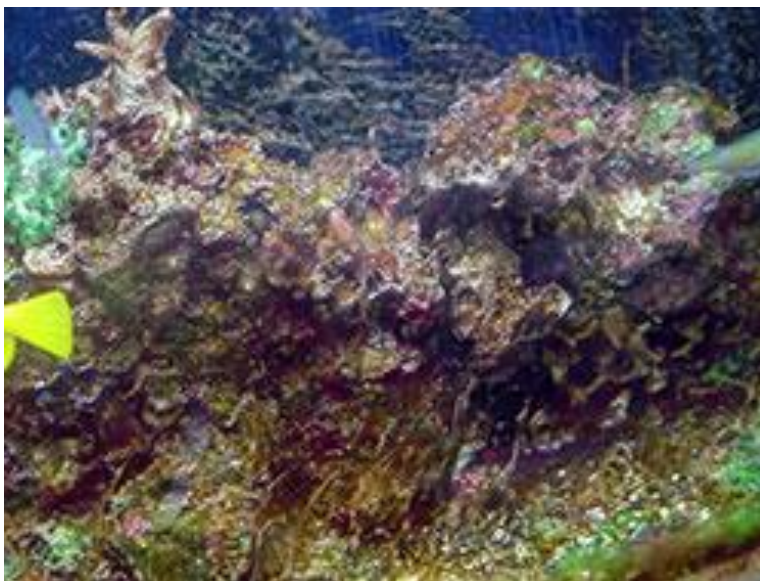
Are you using pure water for your aquarium? Reverse Osmosis (RO) and Deionization (DI) units can work wonders on aquarium algae problems, including reducing the amount of phosphate that enters the aquarium. Many consider RO and RO/DI units to be too expensive to be practical. But if you have several tanks or one large one or a reef tank setup one of these water purification devices are wonderful additions. You can even use RO water for drinking water and some actually prefer the taste of RO water over tap water. Ideally, you want PO<sub>4</sub> to be undetectable with standard test kits.

### Nitrate

Get a Nitrate Test Kit. Nitrate (NO<sub>3</sub>) is something else that aquarium algae utilizes for growth. Nitrate accumulates over time in the aquarium. It's also used as a rough indicator of dissolved organics. To keep your nitrate levels in check:

- make sure your tank is not overstocked
- use purified water (RO or RO/DI) for water changes and top-offs
- stay on top of gravel and sand vacuuming (unless you have a deep sand bed)
- performing regularly scheduled partial water changes with pure water. Just performing water changes could be pointless if your tap water is loaded with nitrates. Test everything.
- in saltwater tanks you can try adding more high quality live rock (the more porous, the better)

- using macro algae (saltwater tanks) or live plants in freshwater aquariums. These will compete with aquarium algae for nitrates.
- saltwater tridacnid clams can process nitrates
- change out or rinse mechanical filter cartridges as often as possible. As the trapped particles break down in the filter they contribute to the bio load on the tank and provide food for aquarium algae.



## Carbon Dioxide

Limiting carbon dioxide (CO<sub>2</sub>) can help too. If you have a heavily planted tank, obviously, limiting CO<sub>2</sub> isn't all that desirable. But in fish only freshwater and saltwater tanks you can increase the surface agitation while keeping the tank under stocked and dissolved oxygen levels should stay near saturation. Most of the time the flow rate in our tanks is inadequate, especially in saltwater tanks. Use common sense here. The goal here is to keep particles in suspension so they get picked up by the mechanical filter or protein skimmer, rather than breaking down inside the tank. If your power heads are preventing the fish from swimming properly or if there is a constant sand storm in your tank, you may have too much flow.

## Silicates

Get a Silicate Test Kit. Do you have a brown dusting on the glass every couple of days? Most like these are diatoms that can be the result of silicates in tap water. They (supposedly) can also be leached from silicate based sand. Some authors claim that RO and RO/DI units are only effective for a short period of time at removing silicates from source water. What to do? There are products that have decent reputations on the market for silicate removal. ROWAphos Phosphate Remover and PhosBan are two that come to mind. As you might have guessed from

the name of these products they also remove phosphates. You can purchase an inexpensive reactor for using this type of filtration called the PhosBan Aquarium Reactor. It hangs on the back of the tank or in the sump. If you think you have a silicate problem one of these devices may be worth looking into.

### More things to do to control aquarium algae...

#### Get Aquarium Plants or Macro Algae

Freshwater aquarium keepers can use aquarium plants to compete for nitrates and phosphates. Saltwater aquariums can use a macro algae such as chaetomorpha. The plants or macro algae will consume nitrates and phosphates and compete with the undesirable algae forms.

#### Clean that power filter

Hang on power filters and canister filters can do a fantastic job keeping your tank water appear clean and polished. But if you don't routinely clean out and rinse your aquarium filter media you are just providing foods for the algae to grow out of control. As the trapped particles in the mechanical filter mineralize (i.e. breakdown, decompose) they are providing energy sources for the aquarium algae. If you don't clean out your filter on a regular basis it could become a nitrate factory.

#### Vacuum the substrate and perform partial water changes

One of the coolest and most useful aquarium products is the Python Aquarium Vacuum. This piece of equipment hooks up to a faucet and lets you easily vacuum the tank with the waste water going down the drain instead of having to haul buckets around. To refill freshwater tanks you can reverse the flow and add fresh water back into the tank. Add the proper amount of dechlorinator into the clean water flow as it goes back into the tank. This is assuming that your tap water is good to go as far as nitrates and phosphates are concerned.

Saltwater keepers can use this tool too even though you should be using premade saltwater for water changes. For saltwater aquariums you will only be able to use the tank water removal part on this type of vacuum. You will still have to use that 5 gallon bucket or whatever you use to pre-mix the saltwater.

Scrub down the glass and then do a water change right afterwards. Vacuum the gravel or top layers of the sand to remove any detritus. If you have a saltwater tank and you have a bubble algae problem, now is a good time to carefully pull them from the rock work. Create a set schedule, say once a week and then stick to it. You really will enjoy your tank much more when it looks clean. The day after a water change and tank cleaning is a great time to take pictures too.



## Get a refugium

A refugium can be a great place to keep competing macro algae or plants. Although primarily saltwater hobbyists utilize refugiums there really is no reason why freshwater hobbyists couldn't use a [refugium setup](#) as well. You can go cheap here too. Form a simple aquaclear hang on power filter, to a bucket, to a plastic tote, all make decent refugiums as long as you can easily hook them up to your display tank. Saltwater aquarium keepers often use fast growing chaetomorpha in the refugium to help compete against algae growing in the main tank. Once the chaeto reaches a large size you can prune some of it thereby exporting nutrients from the system. Freshwater aquarium keepers could use fast growing plants to provide a similar service. The plants and macro algae will compete with any algae trying to grow in the main tank and make it harder for algae to grow.

## Replace your aging lights

Has it been awhile since you've replaced your fluorescents or metal halide [aquarium lighting](#)? As bulbs age they can emit a very different color temperature, frequently emitting light in the spectrum that many species of algae favor. Replace your bulbs every year or so can be a good guideline or even better, follow the manufacturers recommended replacement schedule.

## Ultraviolet (UV) Sterilizer

Some use a sterilizer to fight disease outbreaks in the their tanks but they are better at destroying aquarium algae. There are hang on the tank models that are really easy to install too. Get a powerhead for pumping water into and through the unit and that's it, you're in the business of UV sterilization. Sounds far out doesn't it? Pond keepers may be familiar with the pond UV Sterilizers. These sterilizers are on the expensive side but if you have really expensive fish or corals in your tank they may be worth researching. Also, like all aquarium products, some are better than others. More info on [aquarium uv sterilizer](#).

## Aquarium Blackout

Hobbyists will sometimes run their tanks with no lights for several days to combat algae problems. This is sometimes referred to as a tank blackout. Obviously, if you have photosynthetic plants, corals or inverts (clams) you don't want to try this. Cyanobacteria, often called red slime algae, is a problem often found in marine tanks. This stuff is a mess and can cause many a headache. Hobbyists will try anything to get rid of this unsightly bacteria that can quickly cover large parts of the tank. Doing a partial water change and vacuuming out as much of the cyanobacteria as possible and then doing a tank blackout for several days may work. But why did the red slime algae take hold in the first place? Lack of flow, no protein skimmer, overfeeding, overstocked tank, etc. are the usual culprits. Fix these and then see if the problem clears up before performing a tank blackout.

## Algaecides, supplements and other products

There are many different products available that will make quick work of ridding the fish tank of algae. These are usually just short term fixes though. If you don't fix the original problem you will be spending a lot of money on these products. Use them with extreme caution, if at all. For example, many hobbyists on forums all over the net talk about some of the red slime removers and getting no adverse effects from using them. Indeed, they usually clear up the slime algae over a period of days. But, some of these products could potentially wreak havoc with the bio-filtration in the tank so research them thoroughly before trying them. I'm not saying that they will destroy your bio-filter, just that the hobbyists needs to be doing the legwork on any products and/or supplements they use on their tanks. The main thing to keep in mind though is did you fix the original problems causing the algae growth? If not, the algae will come back eventually.

There are also tons of supplements, vitamins and cure-alls available to hobbyists too. Are they really worth it? That is for you to decide, but be cautious about adding anything to your tank that you can't test the side effects of using. For example, do you have a strontium or molybdenum test kit? Neither do I and that is why I don't use those supplements in my saltwater aquariums, relying instead on regular partial water changes to replenish these trace elements. Some of these products are useful (buffer, calcium additives, plant foods, etc) but be a smart consumer and research these products before using them in your tanks.

To sum up: under stock, feed appropriately, use purified water when your tap water is suspect, perform regular partial water changes, maintain the filter and vacuum that substrate to help limit the amount of foods available to the algae. Keep your water parameters in line with what you are keeping too. For example, saltwater aquarium keepers should try to keep pH in a range of 8.2 - 8.5, sg at around 1.024 - 1.025, calcium at around 420 ppm and alkalinity at around 2.5 meq/L. If you still have a problem with algae growth test the nitrate and phosphate levels. Figure out why these levels are elevated and then fix them. Even after doing all of the above you will still have algae growth in your tank, but it should be much less than before and more easily maintained.

## TROPICAL FISH TIPS

We've tried to come up with a list of general tropical fish tips and hints for beginners to the fish keeping hobby. Below you will find our compiled list of the items we thought would especially help a newbie. If you have a good aquarium or tropical fish tip that you would like to share, just complete the form at the bottom of the page and we'll post it.

### New Fish Tank Tips

- Realize that if you do things correctly, this can be a long-term commitment. Some fish species can live for a very long time if cared for properly.
- Research, research and research some more. It's a really good idea to get as much information as possible on a fish **before** buying it. Try to find out things such as:
  - How big it will eventually get and whether you have a large enough aquarium
  - What are the aquarium water parameters it requires? Find out things such as temperature, pH ranges, etc.
  - What types of fish foods will it eat? Will it take flake foods?
  - The general temperament of the fish species. Will it get along with the fish you already have or plan to get? This is an often overlooked area that needs more attention from hobbyists.
  - Is the species known as a prolific breeder? If so, do you have the equipment needed to keep them or do you have a plan for what happens when your fish has babies? Find out if your local fish store will take the young fish. If you don't have a means of placing them then you should stick with those fish that don't breed as easily in captivity.
  - Is the fish easily susceptible to certain fish diseases?
- Get the biggest tank you can afford. A larger aquarium generally means that your aquarium water parameters will be more stable. A bigger tank gives you some room for error, like when a fish dies and you don't notice it right away. Or, for instance, when your heater breaks and the stores are closed. The water temperature should be more stable in a bigger tank.

- Learn about the fish tank nitrogen cycle. This is a crucial process that you must understand if you want to have long term success with tropical fish.
- Research aquarium equipment before you buy it. Use google (top right of this page) or any search engine, and type in the particular model you are interested in and read what others have to say about it.
- If you enjoy reading, go to the library or buy tropical fish books. Get a couple of books on aquarium information or the species you are interested in getting. Reading a book is probably the fastest way to get up to speed and it provides a great reference for the future. On this site you can find some of the fish books we've reviewed.
- Subscribe to a fish and aquarium magazine. Getting a subscription to a hobby magazine is an easy way to pick up some good tips and it also allows you to stay up to date on anything new in the hobby.
- Give your fish plenty of places to hide. Ironically, it seems the more places they have to hide the less they do hide. Hiding places can be a place of refuge for your fish and it should lower stress levels for them.
- Research the fish you would like to keep and then aquascape your tank for the fish that will be living in it. You want to be able to meet the requirements of the fish you are keeping and modifying the aquascape afterwards is sometimes not an option.
- Get and use an aquarium water test kit to monitor the aquarium nitrogen cycle. The best way to monitor this cycle is to purchase a freshwater or saltwater test kit that will test for ammonia, nitrites, nitrates and ph. Test the water coming out of your tap as well. This will arm you with more information when it comes time for those water changes.
- Don't place your tank next to a window. Sunlight entering your aquarium will cause major headaches in the form of green algae. Direct sunlight will also cause your tank water temperature to increase.
- Don't follow the 1 inch of fish per 1 gallon of water rule. A better guide would probably be 1 inch of fish per 2 or 3 gallons of water. Use the future adult size of your fish when computing how many fish you can keep. Resist the temptation to overcrowd your tank. The more tropical fish you have the more often you will have to perform fish tank maintenance.
- De-chlorinate your tap water before putting it in your tank. There are many de-chlorinators on the market.

- Get an aquarium filter that has multiple (2) media cartridges. This will allow you to change out one at a time. If you swap out all of the filter media with new media you run the risk of having to go through a mini aquarium cycle. Good power filters that hang on the back of the tank usually come with a separate floss system that you never have to change.
- Never rinse out your filter media with straight tap water. Use some of the tank water that you've just siphoned out while doing a water change. The chlorine and chloramine in the tap water will kill the nitrifying bacteria in the filter.

## Stocking Fish Tips

- Slowly add fish to your tank. Never go out and buy a bunch of tropical fish because your tank's bio-load won't be able to handle it. Slowly adding fish gives your tanks biological filtration a chance to catch up.
- Slowly acclimate fish to your current setup or preferably a quarantine tank. When bringing home new fish, dump the bag contents (fish and water) into a **clean** (used only for fish) 5-gallon bucket and then add about 1 cup of aquarium water to the 5 gallon bucket every 10 minutes. Continue to add 1 cup of aquarium water to the 5-gallon bucket every 10 minutes. After an hour or so your fish should be ready to add to the aquarium.
- Make sure that any new fish you are planning to add to your tank will be compatible with the current inhabitants. You need to look at temperament, water parameters and tank size requirements. For instance, please don't put a common pleco in anything under 55 gallons.
- For new tanks, be sure the fish that you add to your tank are hardy. After the tank has aged for a few months, less hardy fish can be added. A tank needs to "mature" (complete the aquarium nitrogen cycle) before it can accommodate certain species of fish. *Submitted by: Dahly*

## Feeding Your Fish Tips

- Give your fish a variety of tropical fish food and not just flakes. Read the nutritional information on the canister of food to see what vitamins and minerals your fish is getting. Flakes can be the primary diet for many fish because they are packed with the vitamins and minerals your fish needs. However, try to supplement their diet with other types of food every once in a while. You should see better colors and increased vitality by varying their diet.
- Do not overfeed your fish. Try for two small feedings per day instead of one large feeding. Give your fish a small pinch of food and see if they eat it all within a minute or two. If you see flakes floating to the bottom of the tank, then you put in too much food. That is, unless you

have bottom feeders. Overfeeding will lead to poor aquarium water quality and will increase the stress levels in your fish.

## Fish Tank Maintenance Tips

- Always turn off the electricity before working in or around your tank. Use a power strip connected to a GFCI outlet and all you have to do to turn off the electricity is flip a switch. Also, use drip loops on all of the cords or hang the power strip on the wall, thereby causing the cords to loop before reaching the plug in. Read the [aquarium electrical safety](#) article.
- Try to change some of the water in the tank on a regular basis. Small frequent (weekly or every two weeks) water changes are better than infrequent large water changes. Small water changes will cause less stress and shouldn't interfere with the biological cycle in the tank. If you have a larger tank, get a Python Aquarium Vacuum. These vacuums make doing water changes a breeze. Gravel vac only half of the tank with each water change. Switch sides on the next water change.
- Avoid wide fluctuations in your water parameters such as temperature and pH. Try to refill your aquarium with water that is as close to the current tank water as possible.

## Fish Disease Tips

- Set up and use a [quarantine tank](#). This is a small inconvenience that can really save your butt.
- Only medicate your main tank as a last resort. Use the [quarantine tank setup](#) for medicating sick fish and for monitoring new arrivals.
- Figure out what caused the fish disease or problem in the first place. Has your tank completed the [aquarium nitrogen cycle](#)? Did you quarantine the new fish? Have you been keeping up on those water changes? What are the readings on your aquarium test kits?
- Try to accurately diagnose the disease before using medication
- Remove any carbon in your [fish tank filters](#) before using medications because the carbon will remove medication that you add to your water.

- Turn off the protein skimmer in saltwater fish tanks while medicating because it can skim off certain medicines.

### Aquarium Lighting Tips

- Don't leave the fish tank lights on all of the time. Try for a 8 to 12 hour period of time for lighting. Most want to have the lights on while they are home. You can get the 8 to 12 hours needed by using a timer. For instance, set it to make the lights come on at 10am and off at 10pm. This will let you view your tank when you get home from work.
- If you are wanting to keep aquarium plants, be sure to research their light requirements first. Determine if you can meet those requirements with your existing lights or if you need more wattage, which might require a different and usually more expensive aquarium hood.

### Breeding Fish Tips

- Make sure that you have the necessary equipment **before** you start breeding fish. If you don't have the space to keep the fry and don't have anyone you can give them to, please don't keep males and females in the same tank. This is especially applicable to those keeping livebearer fish like Mollies, Platies, the Guppy and the Swordtail.
- When breeding tropical freshwater fish, always make note of temperature, ph, water quality, food intake and unusual behavior. That way you can breed fish again easily by recreating these conditions or by observing unusual behavior between pairs. You set yourself up for the possibilities of new arrivals.  
*Submitted By: Eric*
- Get a book on breeding - Breeding Freshwater Fish or Breeder's Guide to Marine Aquarium Fishes

Aquarium maintenance or fish tank maintenance is something that absolutely has to be done on a regular basis to get the most out of this hobby. So you've finally got your fish tank up and running but you're noticing that it's starting to look a little dirty. Or, you notice that you need to top off some evaporated water. This is the time for some routine aquarium care or maintenance. Aquarium maintenance or fish tank maintenance can sometimes be a bother for hobbyists but it doesn't have to be that way. Develop a schedule for carrying out these aquarium maintenance tasks and it will make this hobby more enjoyable. Staying on top of those water changes should increase the health of your fish and make your tank look nicer.

It's important to note that you don't need to completely break down the tank every time you have to "clean your tank" or perform aquarium maintenance. Most of the time you will just need to perform a partial water change (20 percent or so) with a good gravel vacuuming and maybe scrape a little algae off the front viewing panel. If you have a major algae problem then something is out of whack. You may be feeding too much, your tank may be overstocked, you're not performing frequent enough water changes, you're feeding the wrong types of foods, etc. Or, it could be a combination of the above. If you have a problem with cloudy water, please read the article on [Cloudy Aquarium Water](#) and be sure to keep up with your fish tank maintenance!

Ok, let's talk about cleaning your fish tank:

### Items you will need

- Aquarium Glass Scrubber
  - Aquarium Vacuum
  - 5-gallon bucket
- OR
- Python Aquarium Vacuum (Lee's makes an aquarium vacuum too)

### STEP 1: Develop an aquarium maintenance schedule

You will want to clean your fish tank at least once every 2 weeks. Once a week would be even better to take care of your fish tank and it will be easier each time you clean.

### STEP 2: Turn off the electricity to the fish tank.

This will be safer for you and it will keep the filter from clogging up with the debris you pull from the gravel. Read this article on [Aquarium Electrical Safety](#) for more information.



### STEP 3: Clean your fish tank

Each time you clean your aquarium you will need to replace about 20% of the water. Use your algae scrubber to scrape any algae off the front and maybe the sides of the tank. For acrylic aquariums, make sure that you won't scratch the acrylic with whatever you're using to clean the sides. Some use an old credit card for acrylic tanks.

Check out the filter media (i.e. filter floss). If it needs cleaning you can rinse it in some of the discarded tank water. This filter media will have loads of the beneficial bacteria needed for the aquarium nitrogen cycle and rinsing it in tap water with chlorine and/or chloramine can kill some of the bacteria, so use tank water.

#### The vacuum and bucket method

- Place the bucket below the aquarium.
- Insert the end of the vacuum hose into the bucket and the vacuum completely into the aquarium. Use an up and down motion or a 45° angled up and down motion with the vacuum until the water starts flowing into the bucket. Clean as much of the gravel as possible until 20 percent of the water is drained.

#### The Python vacuum method

- Hook up the python to the sink.
- Insert the vacuum completely into the aquarium. Turn on the faucet to begin the siphoning process. Clean as much of the gravel as possible until 20 percent of the water is drained.

### STEP 4: Refill aquarium with de-chlorinated water.

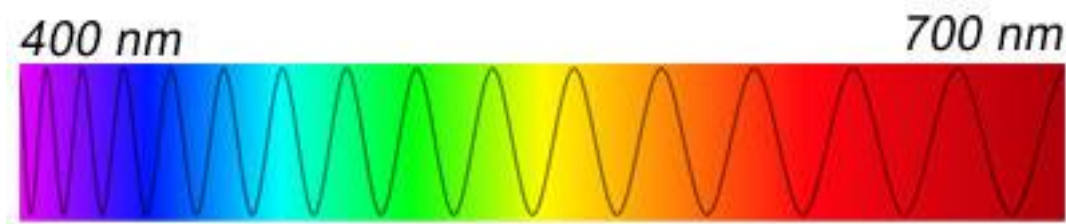
Before adding water to the tank you should add the proper amount of chemicals that will remove the chlorine and chloramine from the incoming water. Prime is a great additive to remove chloramines but there are several available for hobbyists to use. Try to add water that is the same temperature as your tank water. High temperature swings would be very stressful for your tropical fish.

## AQUARIUM LIGHT - FISH TANK LIGHTING

The aquarium light or fish tank lighting is another important aspect when keeping an aquarium. The aquarium light is an often overlooked area that can sometimes be confusing for a beginner to aquariums. The confusion may come from the many available types of fish tank lighting that you can use to light your aquarium. The main types of aquarium light are:

- regular fluorescent lights,
- compact Fluorescent,
- high output (ho) or T5-HO Fluorescent,
- very high output (vho) Fluorescent
- metal halide
- LED - Light Emitting Diodes

The type of light you need for your fish tank really depends on what you plan on keeping in your aquarium. This article is a very general introduction into aquarium lighting and below we discuss the various types of lighting needs based on aquarium type. These are very general recommendations and we encourage you to research your livestock's lighting requirements for best results.



Spectrum of visible light expressed in nanometers (nm).

### Aquarium Light Types



#### Regular Fluorescent Light

These are the type of lights that come with most starter tanks and are very affordable. They typically range from 15 to 40 watts and have Kelvin ratings from 3,000° to 10,000°. Kelvin is the scale used to measure the color temperature. They are very cheap to run and replace. These are the often the stock lights that come with aquarium kits.



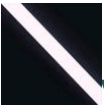
### Compact Fluorescent Light Bulb

These are a step up from the regular Fluorescent lights. They typically range from 10 to 100 watts and have Kelvin ratings from 5,000° to 10,000°. They offer really bright and intense light but they do put off some heat that may raise the tank water temperature. Running power compact lights will require special hoods and because of the heat produced, they often come with installed fans in the hood.



### High Output (HO) or T5-HO Fluorescent Light

HO Fluorescent lights typically range from 20-60 watts and have Kelvin ratings from 6,000° to 11,000°. They are more expensive than regular Fluorescents and usually last longer. These lights require a T5 light fixture. T5-HO lights can be used to grow some of the most demanding SPS corals if placed in the middle to upper regions of the tank. I've been running reef tanks for years with T5-HO's with very good results. They provide lots of light and run much cooler than metal halides. Fixtures often have fans incorporated into them to keep the bulbs operating at optimum levels. Planted tank keepers may find that T5-HO's are good to use for their plated tanks as well.



### Very High Output (VHO) Fluorescent Light

VHO Fluorescent lights typically range from 75-160 watts and have Kelvin ratings from 10,000° to 20,000°. These lights are very expensive and produce a lot of heat. They require a ballast and/or special fixture especially for VHO lights. They have fans incorporated into the aquarium lighting unit to help keep the lights and aquarium cool. Even though they come with fans you may need to equip your tank with an aquarium chiller to prevent your tank water from overheating. These are not as common as many of the other forms of aquarium lighting.



### Metal Halide Light Bulb

Metal Halide lamps typically range from 175-1000 watts and have Kelvin ratings from 5,000° to 20,000°. This type of light is closest to the sun in terms of luminosity but they are very expensive to buy, operate and replace. They produce a lot of heat and usually must be fan cooled. Ballasts with fan units included are widely available. Metal Halides were often the preferred method of lighting a reef tank setup with anemones and corals that need higher intensity lighting but they are losing favor in place of T5-HO's and LEDs.



## LED Aquarium Light

Are LED aquarium lights what we have in store for the future of aquarium lighting systems? Prices are still very high and they will need to drop significantly in price before more hobbyists will transition to them. The prices are coming down, just not fast enough. They offer many advantages over previously mentioned lights. Some of the advantages of LED lights over conventional Fluorescents and metal halides include:

- LED aquarium lights run much cooler than standard Fluorescents and metal halides
- LED aquarium lights consume less energy than the other lights
- They have a much longer life span
- There is no filament to break, so they could be considered more durable
- They can be configured in many ways due to their small size.
- Many of the top end LED fixtures come with modes that let you totally customize lighting colors and intensity on repeatable schedules.

Many of the light fixtures being sold now include moon lights which are LEDs. So we're starting to see them more often, but even though these LED aquarium lights are very promising we are probably still a few years away from using them as the primary light source on most home aquariums. Check out the ecotech radion LED lighting fixture which is getting really good reviews from hobbyists.

## Freshwater Aquarium Light - Fish Only

For a freshwater tank with no live plants you can get by with the low watt Fluorescent lights. These lights are typically between 18 and 40 watts and should last for a year or longer before they burn out. You mainly want light bulbs that will bring out the best colors in the fish you are keeping.

## Freshwater Aquarium Plant Lighting

Live plant keepers will need to upgrade their lighting system. The light type you need depends on several factors:

- Depth of the tank
- Plant species you plan on keeping
- Growth rate desired

Typically, plant keepers try to provide anywhere from 2-5 watts per aquarium gallon. Research

the plants you want to keep beforehand to determine if you can provide the light needed. T5-HO's can be a good option for plant keepers.

### Aquarium Photo Period - How long do you leave the lights on?

How long should the fish tank lights stay on for? We get this question frequently. A good range to aim for would be anywhere from 6 to 12 hours. Remember that fish like and need to rest just like other animals.

Fish only setups could range from 6 to 12 hours, reef tank setups and freshwater planted aquariums could range from 10 to 12 hour photo periods. Leaving the lights on for longer time periods could contribute to nuisance algae growth (just one of the factors with algae growth), higher tank temperatures and quicker tank water evaporation. Be consistent and if you can afford it, invest in a light timer.

### Aquarium Light Timer

You may also want to get an aquarium light timer. A light timer can help make running an aquarium that much more enjoyable because it's one less thing you have to mess with. Higher end fish tank hoods and fixtures have multiple power cords that are tied into the multiple light sockets within the hood. This allows you to setup your timer to turn on the various lights at different times.

For instance, a popular hood nowadays is the compact Fluorescent hood incorporating an actinic bulb, a full spectrum bulb and a moon light. You could set up the timer to turn on the actinic bulb to go on first and stay on for 12 hours, then have the full spectrum bulb come on an hour or so later and stay on for 10 hours. This could simulate dawn and dusk by having the actinic bulbs come on an hour early and stay on an hour later. Finally, you could have the moon lights turn on when the actinics turn off. Who knows, you may even start to see breeding behavior in certain species that may be more in tune with the light of the moon in this type of setup. Another side benefit of using a moon light is the super cool effect it creates in the aquarium when all the other lights in the room are off.

### Conclusion

As you can see, the type of light you need really depends on the type of tank your running. Freshwater and Saltwater fish only tanks can usually get by with the regular Fluorescent lights whereas the freshwater plant keepers and saltwater reef tank keepers will need to invest in better light sources.

Please practice good aquarium electrical safety and be sure to use drip loops and GFCI outlets!

For many fish tank hobbyists, aquascaping or aquarium aquascape design can be one of the most enjoyable parts about setting up a fish tank. Decorating your aquarium can be quite fun, but coming up with a good aquarium aquascape is not just about making the tank look nice. You really should take into account the tank's future inhabitants when figuring out what you need to do. This is where you get to exercise both sides of your brain to try and come up with something that is not only nice to look at but something that is functional as well.

### Research Fish and Animals First

Ideally, you should research and decide on the fish and any other animals you want to keep before you even buy a tank. Many freshwater hobbyists think the common pleco is a cool fish to have and indeed it is. But, the common pleco really has no place in a tank smaller than 55 gallons as adults.

Many saltwater hobbyists are really taken by many of the tangs (surgeonfish). Without research, they have no clue that tangs really need a large tank for adequate swimming space. Dottybacks are another popular species and one that needs hiding spaces to feel secure. Creating hiding places for your dottyback is an important consideration in your aquarium aquascaping plans.

For the future reef tank keepers out there, some corals need intense aquarium lighting whereas others prefer less lighting. Figuring out which corals you would like to keep may dictate your aquarium aquascape and the arrangement of the saltwater live rock in your tank. For instance, if you want to keep some light loving corals you may need to build up the rockwork so that you could place these corals with the intense lighting requirements higher in the tank.

Hopefully you can start to see the importance of figuring out what you want to keep **before** you buy your first piece of fish tank equipment.

### Keep Aquarium Maintenance In Mind

You've got your tank setup and your aquascape looks fantastic! Everyone compliments you on how nice it looks and you're feeling really good. However, a week or two goes by and it's time for some routine fish tank maintenance tasks. Namely, scraping the tank glass to get rid of some unsightly algae that is starting to grow on the front viewing panel of the tank. But wait, aah man, I've put the rock too close to the front glass and I can't get the scraper in between the rock and the glass. Doh!

Another favorite task of many aquarists is gravel vacuuming. Yeah! Don't you just love vacuuming the gravel? Just kidding. However, what must be done, must be done. It's time for another - doh! I've grouped too many of these plants together and it's going to be darn near impossible to effectively clean the gravel in that part of the tank. Looks like the beginnings of a small nitrate factory in the making, which may be a big headache down the road.

The point here is that you want to aquascape effectively. Arrange the fish tank so that future tank maintenance tasks remain as easy and efficient as possible.

## Freshwater Tank Decorations

### Aquarium ornaments

Roman columns, the Parthenon, funny signs, the classic treasure chest or underwater diver that does double duty as a bubbler, small replica bridges, sunken ships, replica battleships, you name it. The amount of available aquarium decor is vast. Kids almost unanimously get that small underwater diver in their first tank. You know the one. It has a red diving suit and the bubble mask that is waving hello. It's almost like a rite of passage of some sort.

### Driftwood

Often seen in live plant setups, a nice piece of driftwood can be a great centerpiece of the aquascape in a freshwater tank. Don't just pick any old piece of wood and place it into your tank. Get some from your local fish store and ask questions about the curing process. To be on the safe side, you really need to monitor any wood in a separate quarantine tank and use your aquarium test kit to test the water parameters in the quarantine tank for several weeks or months before you can assume that it's safe to add to your main tank.

### Rock

Just like driftwood, rocks can make nice additions to freshwater tanks. You sometimes see larger flat shaped rocks that can form ledges that provide hiding places for your fish. A lot of African cichlid lovers really like Texas Holey rock because it contains limestone that slowly dissolves in the tank water increasing the buffering capacity. Just like the driftwood, you will want to thoroughly clean any rock and quarantine it for several weeks/months before putting it into a display tank.

### Fake Plants

The nice thing about fake plants is the ease of cleaning them. The bad thing about fake plants is that, well, they sometimes look really fake - especially when the base of the artificial plant pokes out of the substrate. These can sometimes detract from the aquascape... but if done right, you can pull it off.

## Live Plants

Live aquarium plants provide functionality as well as beauty. Nitrate removal, oxygenation, shelter and breeding sites are just some of the wonderful benefits of keeping live aquarium plants. Live plants kept properly can help create some truly breathtaking, realistic looking aquarium scenes. There are many live aquarium plants available each having differing lighting and supplement requirements. Research any live plants that you're interested in beforehand is the key.

## Aquarium Background

The tank's background can sometimes really set off the aquascaping in a tank. You have many options here. There are tons of ready-made tank backgrounds that are of picturesque nature scenes, coral reefs, etc. Choose one that you like and one that won't clash with what's going to be in the tank.

Another option is to paint the outside back glass of the tank a solid color such as black, dark green, deep blue, slate blue, etc. Appliance spray paint sticks to the glass well. Many hobbyists like painting the outside back glass better than using a tank background because you don't have to worry about water getting in between the background and the back glass. Believe me, it will happen and then it can be a pain to clean it. It's not as big a problem for freshwater tanks as it is for saltwater tanks. In marine tanks, salt creep will eventually make its way in between the background and the glass causing unsightly salt creep on the glass.

## More Cool Ideas

For more ideas and to get those creative juices flowing, it can be really helpful to check out what other hobbyists are doing. Check out the fish tanks in the FishLore [fish and aquarium picture gallery](#) and the [Your Fish Tank](#) pages to get some ideas. Once you get your tank set up, show it off by signing up to become a [FishLore member](#) (completely FREE) and you can then upload photos of your masterpiece. Have Fun!



### What is an Aquarium UV Sterilizer?

The aquarium UV Sterilizer is a water filtration device that uses an ultraviolet light bulb to kill microscopic organisms that are free floating in the water. Parasites, viruses, algae and bacteria (good and bad) are the type of things that are "killed" after passing through the ultraviolet sterilizing unit. UV sterilizer devices can be used on swimming pools, in liquid factories (think beer) and in the home aquarium using an aquarium UV sterilizer. Some large water purification centers employ some sort of UV sterilization on the outgoing water. These sterilizer units are also sometimes used in outdoor ponds to help control algae growth and they seem to do a decent job.

When using a UV Sterilizer in a home aquarium, the UV unit should be placed last in the filtration line. You want to first filter the aquarium water through your mechanical filter and then run the water through the UV device before returning the water to your fish tank. By first removing the solids in the aquarium water with your mechanical filter (canister filter, etc.), you are helping your UV unit to attain maximum operational efficiency.

The effectiveness of any UV sterilizer is determined by the UV bulb wattage, the age of the UV bulb, how clean the quartz sleeve is and the flow rate of the unit.

### Aquarium UV Sterilizer Light Bulb

The effectiveness of the bulb will diminish with time and use. Manufacturers usually recommend replacing the bulb after 6 months. You can find units with bulbs anywhere from 8 watts up to as high as 130 watts. The higher the wattage of the light, generally the more effective it is. If you have a unit with a lower wattage then you will want to have a lower flow rate to get the most out of the unit.

### Aquarium UV Sterilizer Flow Rate

The flow rate of the unit is an important consideration. Flow rate is measured in gallons per hour (gph) or liters per hour (lph). While higher flow rates may be acceptable for killing algae and some bacteria, you will usually need a much slower flow rate to kill parasites. For example, a 15 watt bulb will usually kill algae and bacteria with a 120 gph flow, but you will need to lower the flow rate to around 75 gph for it to effectively kill parasites. Read the manufacturers recommendations for your particular unit for effective bulb wattage and flow rates.

### Keep the Quartz Sleeve Clean

One thing that some hobbyists forget about is the quartz sleeve that the UV bulb slips into. You must clean this quartz sleeve periodically to remove any buildup in order to keep your sterilizer

operating at peak efficiency. The better sterilizer units have a wiper with a handle outside the unit that allows you to quickly and easily clean the sleeve without taking the sterilizer apart.

### Where can I get a UV Sterilizer?

Nowadays Ultra Violet sterilizers can be found in local pet stores and they can definitely be found online. Look on eBay or similar auction sites for good deals on second hand and even brand new units. Since they are very expensive, you will want to research the unit you're interested in getting before investing in one. Use a search engine to find reviews on tropical fish forums and discussion boards. Since you will usually need to change out the bulb every 6 months or so, find out how much a replacement bulb costs. The replacement bulb price may help when comparison shopping.

### Do I really need an Ultra Violet Sterilizer for my aquarium?

For indoor freshwater fish tanks that are well filtered and properly maintained, you really don't need one. Saltwater hobbyists may have a good excuse for getting one because of the high price tags for many of the saltwater species. However, most hobbyists really don't need one if they are doing things properly. Doing things properly would mean using a quarantine fish tank for new arrivals and performing frequent fish tank maintenance.

Outdoor pond keepers may want to invest in a UV sterilizer to help control algae problems in their outdoor ponds.

### What is a Reverse Osmosis Water Filter System and should I use it for my aquarium?

Reverse Osmosis and Deionization is a process whereby water is purified as the water gets pushed through some sort of membrane. The membrane traps the impurities and they can remove 90% - 99% of the impurities from the water. The type of membrane you use determines the amount of impurities that the Reverse Osmosis unit will remove.

Our drinking water often includes minerals, heavy metals (mercury, copper), phosphates, nitrates, pesticides and herbicides (from farming and lawn fertilizers), chlorine and chloramine. These can all be potentially harmful to your fish. However, most municipalities do a decent job of eliminating most of these impurities from our drinking water. Water treatment plants add chlorine and chloramine to the water to kill any harmful bacteria or other "bad stuff".

One side effect from using a Reverse Osmosis unit is that they will remove some of the "good stuff" along with the "bad stuff". Because of this you will need to add the "good stuff" (minerals and other essential elements) back into the water before using it in your aquarium. There are products on the market called RO Conditioners which are made specifically for this process. R/O Right is one product that contains the essential minerals and other elements that your fish need. It should be noted that these are only used for freshwater tanks because saltwater mixes already contain the essential elements you need.

### Is a Reverse Osmosis Water Filter Really Necessary?

If you are planning on keeping a saltwater reef tank with various corals and anemones or a particularly challenging freshwater species such as Discus, it may be a good investment. If you live in an area where you can only get well water or your water source is suspect, it may also be a good investment. It really depends on the water coming out of your tap. Some water treatment centers will send out annual reports of the water quality in your area. If they don't, there are places that you can send your water off to be tested, all for a fee of course.

For most hobbyists these Reverse Osmosis units probably are not all that necessary. Many tropical fish hobbyists have been keeping fish successfully for years without using a Reverse Osmosis Unit. If you're a reef tank keeper though you will probably need to invest in one. RO units are usually fairly expensive and you probably don't need one if you have decent water quality. Research your tap water to determine the amount of impurities your water contains and then make an educated decision on whether or not you really need to purchase one of these units.

## Reverse Osmosis Water Filter Maintenance

You will need to perform maintenance on your RO unit periodically. How often hinges on how hard your water is and/or how many impurities are included. You can get an RO flush kit that removes some of the lodged deposits in the membrane and potentially prolong the useful life of the membrane. These flush units are usually inexpensive and can save you some money by prolonging the life of the membrane.

## What is Deionization?

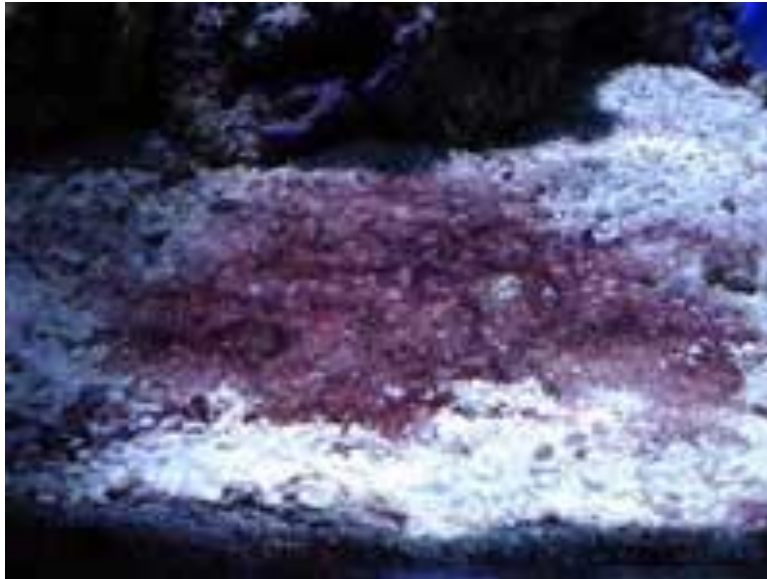
Deionization is another type of water purification. The deionization unit works by utilizing a process known as "ion exchange". Without getting too technical, this basically means that it removes the impurities and replaces them with pure water. Do you really need to know exactly how it works? No, not really.

Deionization units are usually used in conjunction with RO units to give you 99.9% pure water. The tap water is usually first pushed through the RO unit and then sent to the Deionization unit for further purification.

## Periodic Testing

You will need to test the output water from these units periodically to determine if they are still producing pure water. Get water test kits that will test the General Hardness and the Alkalinity of the water. You want both readings to be 0. If the test readings start to trend higher you will know that you soon need to replace the membrane and/or cartridge. The easiest and quickest way to tell when your Reverse Osmosis filter needs to be changed is to use a Total Dissolved Solids (TDS) meter. I like to change my cartridges out when the TDS measures over 10 ppm or so for my reef tank water.

Written By: Sirdarksol for the FishLore Magazine



### An Aquarist's Guide to Blue-Green "Algae"

Your tank is running well, except for a light dusting of an intense green algae on parts of the glass. All of the sudden, sheets of bluish-green stuff are spreading across the decor. Still, it's just an algae outbreak. Easily dealt with. You step up your water changes and manually remove the algae. Day after day, however, it comes back. You buy a cleaning crew of shrimp, snails, and/or fish known to eat algae, and yet nothing seems to change. Worse, you think your fish are getting sluggish. You check the fish disease charts, and they don't seem to fit any of the profiles. They sometimes hover near the top of the tank, at other times the bottom. They never seem to gasp for breath, but always are languid. The more tender inhabitants may even be dying without apparent reason. You bring out the big guns. You go out and buy a bottle of algaecide. And still, nothing happens, other than the death of any inverts and live plants that happen to live in the tank.

This is not an uncommon occurrence, nor are these actions unreasonable, given the information that most aquarists have. For all intents and purposes, this seems to be some sort of algae outbreak. Even its name, "blue-green algae" says so. However, it isn't an algae. It's actually a strain of bacteria known as cyanobacteria (its name derived from its vivid color, which would be beautiful if it didn't signal so much trouble for an aquarium). In addition to blue-green, cyanobacteria can be black or even red.

## What Is Cyanobacteria?

Some cyanobacteria is beneficial, being an important part of the nitrogen cycle. Spirulina, which is hailed as a "super food," being rich in all of the amino acids, as well as other important nutrients, is a form of cyanobacteria. Others, however, produce various forms of neurotoxins, hepatotoxins, cytotoxins, and endotoxins. All forms of cyanobacteria seem to be somewhere between plant and bacteria. They have a gel-like cell wall (cell walls are usually reserved for plants) and are fed partially by photosynthesis. They also possess bacterial traits. Some are free-floating, some form threads, or sheets, or even hollow spheres. Thankfully, it seems that most of the harmful cyanobacteria take the form of brilliant sheets, making it easy to identify.

A few things contribute to the beginning of a cyanobacteria outbreak. Too much light, too much phosphate, and general poor water quality can begin an outbreak. Introducing plants that have not been quarantined can bring on an outbreak in a seemingly healthy tank. Once it has begun, however, cyanobacteria can be much harder to get rid of than an algae outbreak.

## What to Do?

If you are facing an outbreak of cyanobacteria, there are a couple of options for treating the tank:

### Antibiotics for Cyanobacteria

The first is a fairly simple remedy. Dosing the tank with an antibiotic will kill off the infestation pretty quickly. This has several downsides that offset its ease and speed. The first is that every use of antibiotics has the potential to create a strain of antibiotic-resistant bacteria. You may get rid of the cyanobacteria only to find that your tank has been infested with a strain of fish TB that doesn't respond to the antibiotics. The second is that some fish and inverts don't deal well with certain antibiotics. The third is that dosing a tank with antibiotics is a good way to completely un-cycle the tank.

A good way to at least partially bypass the loss of your tank's cycle is to pull the media out of your filter and store it in another tank. If you don't have another tank, you can seal it in a bag with some tank water and keep it in the refrigerator. After you have set aside the filter media, treat the tank. Once treatment is done, run fresh activated carbon in the tank for an hour, then replace the filter media. This should leave your tank with a significant portion of its nitrifying bacteria intact.

### Starve the Little Buggers

The second method, while more work and time intensive, has no real negative effects on the tank itself. In fact, it is, in general, good for the fish. The first thing to do is to thoroughly clean every surface of the tank. Second, step up water changes to lower the phosphorous levels in the tank. If your water supply normally contains phosphates, you may want to invest in some phosphorous-removing filter media. Third, kill the lights for several weeks. Fourth, feed your fish less. Most fish food contains phosphorous, which ends up in the water, feeding the cyanobacteria. Combined, these actions should starve the cyanobacteria out of the tank. This procedure takes time, of course, which is its greatest downside.

During either procedure, it is a good idea to remove the bacteria as it appears. You can often get it with the vacuum if you lightly scrape at the sheets with the edge of the vacuum attachment.

### Preventing Cyanobacteria

As with most tank problems, the best way to deal with a cyanobacteria outbreak is to not let it happen. Frequent water changes will help keep phosphorous levels down. Quarantining all new livestock and plants for several weeks will minimize the chance of introducing a virulent strain of cyanobacteria to your tank. It is far easier to treat a quarantine tank, or even just break it down, than it is to do so to a fully set up aquarium. Feed your fish only what they can eat in a minute's time to further limit phosphorous as well as waste products.

Although it is a pain to get rid of, if you know about cyanobacteria, and if you react properly to it, this does not have to be a tank killer. The main reason it is so difficult is that many aquarists don't know how to deal with the issue. Once that hurdle is behind you, it should be no problem to deal with an outbreak of cyanobacteria, if one does happen.

## AQUARIUM ALGAE SCRAPER DIY

If you're looking for a homemade DIY Aquarium Algae Scraper you've come to the right place. Are you trying to get that encrusting coralline algae or the red algae off the front viewing panel of your aquarium? Sometimes even the green algae can be tough to scrape off. No matter how many times you go over it with that magnetic algae scraper it just won't come off! Grrr. Sounds like it's time to come up with your own device for algae control. This DIY tool works on red marine algae, green algae, brown algae or any others that will grow on the fish tank glass. This tool is only recommended for glass tanks. **Do not use this on an acrylic tank!**

This algae scraper is a very easy DIY (do it yourself) project and should only take about 20 minutes or less to make one of these homemade algae scrapers. Granted, this tool isn't very pretty, but it does a great job on that hard to scrape algae! You will need the following parts:

- 1/2 inch size pvc pipe, comes in 10 foot long pieces - approximately \$1.50
- 1/2 inch size 45° angle elbow joint - approximately 50 cents
- pvc pipe cutter or a hacksaw - pipe cutter is approximately \$10
- razor blade - pack of 100 is \$5
- Total Cost: approx. \$17

DIY Algae Scraper Parts



### DIY Algae Scraper Directions:



1. Measure off about a 36 inch piece of pvc pipe and make the cut with your pvc cutters or hacksaw. You could make this piece shorter than 36 inches if you have a smaller tank. We made ours this long to prevent our hands from getting wet and possibly polluting the tank water.
2. Measure off a 3 inch piece of pvc pipe and make the cut.
3. Stand the 3 inch pvc on end and use a knife to make a 1/2 inch cut in the middle of the pvc pipe. We made this cut by placing an old pocket knife on the end of the pvc and hammered the pocket knife blade down into the pvc until it was about 1/2 of an inch deep. The trick is to make this cut with the right size blade. You don't want to make the cut too wide or the razor blade won't stay secured. **Be careful doing this!**
4. Assemble the parts together. Plug the 45° elbow joint into one end of the 36 inch pvc and then connect the uncut end of the 3 inch pvc into the other end of the elbow joint.
5. Place a razor blade into the cut end of the 3 inch pvc.
6. Scrape off that algae! Be very careful around the aquarium sealant that holds the glass walls together. You don't want to compromise the glue that holds your tank together! Take your time and gently use an up and down motion to scrape off that marine algae. Don't push too hard, in fact you shouldn't even need to with the razor blade.

#### Finished Homemade DIY Algae Scraper



The good thing about this algae scraper is that you can change out the razor blade easily once it becomes dull. A 100 pack of razor blades is fairly inexpensive and should last a long time. **Do not use this scraper on an acrylic tank. You will scratch the tank.**

Anyone wanting to be successful at the tropical fish and aquarium hobby must put forth the time necessary to understand some basic fish tank water chemistry. Understanding aquarium water chemistry will help your fish to not only survive but thrive!

I recommend that you get a good aquarium water testing kit or many individual kits. You will need kits that will test for the following:

- **Ammonia**
- **Nitrite**
- **Nitrate**
- **pH**
- **Water Hardness**
- **Chlorine / Chloramine**

### **Definitions**

#### **Aerobic Bacteria**

This is bacteria that requires oxygen to live.

#### **Anaerobic Bacteria**

This is bacteria that can live without the presence of oxygen, or bacteria that does not require oxygen.

#### **Ammonia**

This chemical is the result of fish waste and decomposing food in the aquarium. Ammonia is the leading killer of tropical fish. New tanks that are going through the aquarium cycle or heavily stocked tanks will show ammonia readings with your test kits. Ideally, we want the ammonia reading to be 0 ppm.

#### **Chloramine**

Chloramine is a combination of chlorine and ammonia. It is a stronger disinfectant than chlorine alone and is used in areas where this extra disinfectant is needed. As with chlorine, you must eliminate this chemical from your tap water before adding it to your aquarium or it too will kill your tropical fish.

#### **Chlorine**

This chemical is found in most tap water and it is used to kill the bad bacteria in our drinking

water. Chlorine must be eliminated before entering your aquarium or it will kill your tropical fish.

## Copper

This heavy metal can come in with the tap water if you have older copper pipes. It can also get introduced to your tank if you've used any copper based medications. Copper can be very harmful to fish and invertebrates.

## Nitrate

Nitrites are converted to nitrates during the cycling process. Nitrates are not as toxic as ammonia or nitrites but they are harmful and will stress your fish at high enough levels. The only way to remove the nitrates is through a partial water change. Ideally you want to have test kit readings of less than 20 ppm in freshwater tanks and even less in saltwater tanks.

## Nitrite

Ammonia gets converted to nitrite by the bacteria in your tank. Nitrite levels will soar in new tanks that have not yet been cycled. Nitrite is just as toxic to tropical fish as ammonia and the only way to quickly reduce nitrite levels is through a water change. Nitrites will eventually be converted to nitrate by the bacteria growing in the tank and filters. Ideally, in established tanks you want this reading to be 0 ppm with your aquarium test kit.

## Nitrogen Cycle

This cycle usually takes from 2-8 weeks to complete and will happen in all new aquariums. You could speed up the process by using the filter material or gravel from an established tank. Even then it could still take a few weeks for the tank to cycle. This is the cycle whereby Ammonia is converted to Nitrites and Nitrites are converted to Nitrates. Please read the Aquarium Nitrogen Cycle article for more information.

Ammonia > Nitrite > Nitrate

## pH

pH is the scale used to measure the acidity or alkalinity of water. The scale ranges from 0 to 14 with 0 being the most acidic, 7 being neutral and 14 being the most alkaline. It is possible to raise or lower your pH levels with water changes or chemicals from your local pet store.

## Phosphate

Phosphate can be introduced to your aquarium mainly from tap water, dead plants and fish food. High phosphate levels can cause algae outbreaks. There are products on the market to remove phosphates and you can do your part by keeping up with your aquarium

maintenance and performing regular water changes. Saltwater reef tank keepers and freshwater plant keepers may want to invest in a phosphate test kit.

### **Salinity**

This is the amount of dissolved salts in water and is measured using a hydrometer.

### **Specific Gravity**

This is a density measurement for the amount of dissolved salts in saltwater compared to freshwater. Explained another way, saltwater is composed of many more elements than freshwater. The specific gravity measurement shows us how much heavier or denser saltwater is compared to freshwater.

### **Water Hardness**

The hardness level of water has to do with the amount of minerals that are dissolved in the water. Calcium and magnesium are the primary minerals that are dissolved in tap water. "Soft" water has relatively few dissolved minerals whereas "hard" water has many dissolved minerals. Water hardness is not really an issue unless your water is excessively soft. Then you may have problems with runaway pH levels. For saltwater aquariums this is especially true. The carbonate hardness of saltwater can give you a good indication of how stable your pH is. KH is aka as alkalinity in Saltwater.

An aquarium water test kit is needed if you want to be successful in the tropical fish hobby (freshwater or saltwater). You will need to know how to test your fish tank water with an aquarium water test kit during the cycle and whenever problems arise.

There are many aquarium test kits that you can use on your aquarium including:

- Ammonia
- Nitrite
- Nitrate
- Salinity/Specific Gravity
- pH
- Carbonate Water Hardness
- Alkalinity
- Chlorine and Chloramine
- Copper
- Phosphate
- Dissolved Oxygen
- Iron and Carbon Dioxide
- And a few others

Buying these aquarium test kits individually can get expensive. You can usually save a few dollars by getting a master test kit. For most hobbyists these master test kits will be sufficient. Live plant keepers and saltwater reef tank keepers may need to invest in additional specialized mini test kits such as copper, phosphate, dissolved oxygen, etc.

Some aquarium test kits come as dip strips that you dip in a test tube filled with water from your tank. You then compare the color with the card that came with the kit to get your final reading for each particular test. The other type of test kit has liquid droppers. You dispense the liquid (certain number of drops) into a test tube with tank water. You usually need to shake the tube and wait a few minutes for the test to develop. You then match the color of the water in the test tube against a test card to get your final reading. It can be a good idea to ask someone else in your house to compare the colors and give you a second opinion. Don't tell them what it means, just ask them to match up the colors. As hobbyists, we may tend to skew the results in our favor, so a second opinion may help keep us honest.

The Freshwater Master Aquarium Test Kit usually contain tests for ammonia, nitrite, nitrate and pH. Saltwater Liquid Master Test Kit usually contain tests for ammonia, nitrite, nitrate, pH and sometimes alkalinity. See below for more information on these terms.

### Alkalinity Test

This test determines how stable your tank water is relative to a shifting pH. It can be thought of as your tank's buffering capacity or it's ability to keep the pH level stable. In most saltwater tanks you want this reading to be in the 7-12 dKH range.

### Ammonia Test

This chemical is the result of fish waste and decomposing food in the aquarium. Ammonia is the leading killer of tropical fish. You want this reading with your test kit to be 0. Read about the [Nitrogen Cycle](#).

### Calcium Test

Primarily for saltwater aquariums, a Calcium test kit is important to use when dosing calcium in reef tanks. Calcium is a primary element that corals need to grow and dosing calcium may be a necessity for the health of these animals. You need a test kit to determine how much and how often to dose. For more information on dosing calcium, please read [Saltwater Supplements](#).

### Chloramine Test

Chloramine is a combination of chlorine and ammonia. It is a stronger disinfectant than chlorine alone and is used in areas where this extra disinfectant is needed. As with chlorine, you must eliminate this chemical from your tap water before adding it to your aquarium or it too will kill your tropical fish.

### Chlorine Test

This chemical is found in most tap water and it is used to kill the bad bacteria in our drinking water. Chlorine must be eliminated before entering your aquarium or it will kill your tropical fish.

### Copper Test

This heavy metal can come in with the tap water if you have older copper pipes. It can also get introduced to your tank if you've used any copper based medications. Copper can be very harmful, even lethal, to fish and invertebrates.

### Iodine Test

An iodine test kit is needed for saltwater hobbyists that keep corals or invertebrates that require iodine. Iodine is used up quickly by the aquarium inhabitants and skimmed out with the protein skimmer. I wouldn't recommend dosing iodine without using a test kit.

## Magnesium Test

Another important parameter to keep an eye on for saltwater fish keepers is magnesium. You want to keep this in the range of natural saltwater which is 1200 to 1400 ppm. I try to keep mine in the middle around 1300 ppm. Magnesium is depleted over time and will need to be replaced through water changes and maybe even dosing, but not until you get a test kit for it.

## Nitrate Test

Nitrites are converted to nitrates during the cycling process. Nitrates are not as toxic as ammonia or nitrites but they are harmful and will stress your fish at high enough levels. The only way to remove the nitrates is through a partial water change. Ideally you want this reading to be less than 20 ppm, in reef tanks you want this to be as close to 0 as possible. Read about the Nitrogen Cycle.

## Nitrite Test

Ammonia gets converted to nitrite by the bacteria in your tank. Nitrite levels will soar in new tanks that have not yet been cycled. Nitrite is just as toxic to tropical fish as ammonia and the only way to quickly reduce nitrite levels is through a water change. Nitrites will eventually be converted to nitrate by the bacteria growing in the tank and filters. You want this reading to be 0.

## pH Test

pH is the scale used to measure the acidity or alkalinity of water. The scale ranges from 0 to 14 with 0 being the most acidic, 7 being neutral and 14 being the most alkaline. It is possible to raise or lower your pH levels with water changes or chemicals (use extreme caution!) from your local pet store. Different fish species require different pH levels. Try to keep fish that all require relatively similar levels of pH. Here is an article with an interesting take on pH: [pH : To be or not to be considered?](#)

## Phosphate Test

Phosphate can be introduced to your aquarium mainly from tap water, dead plants and fish food. High phosphate levels can cause algae outbreaks and can slow coral growth rates. There are products on the market to remove phosphates (check out [biopellets](#)) and you can do your part by keeping up with your [aquarium maintenance](#) and performing regular water changes with a [Reverse Osmosis Water Filter](#). Saltwater reef tank keepers and freshwater plant keepers may want to invest in a Phosphate Test Kit.

## Water Hardness Test

The hardness level of water has to do with the amount of minerals that are dissolved in the water. Calcium and magnesium are the primary minerals that are dissolved in tap water. "Soft"



water has relatively few dissolved minerals whereas "hard" water has many dissolved minerals. Water hardness is not really an issue unless your water is excessively soft. Then you may have problems with runaway pH levels. For saltwater aquariums this is especially true. The carbonate hardness of saltwater can give you a good indication of how stable your pH is.

By Madhu Soodhanan *of India*

Courtesy: [Aqarticles](#)

Whenever one surfs the net or refers to a book about fish-keeping, pH would be a short-listed, important point of concern. Many of us have read articles/books saying fishes are not tolerant to wide pH ranges or pH fluctuations. But is pH that important in fish-keeping? Is it easy to handle pH?

### What is pH?

pH is a logarithmic scale of the proportion of H<sup>+</sup>(Hydrogen) and OH<sup>-</sup>(Hydroxyl) ions ranging from 0-14, with a neutral value of 7. When the H<sup>+</sup> ion concentration is higher, water is said to be acidic; when OH<sup>-</sup> concentration is higher it is said to be alkaline. In other words if the concentration of dissolved minerals is high then pH is high and vice versa. pH is also dependent on various factors like water hardness, dissolved minerals, oxygen level and many more.

### Its importance

Many believe that even the smallest change in pH is highly stressful to aquarium fish. You might have come across volumes saying that a pH of 6.5 is 10 times more acidic than a pH of 6.6. Many have a deep rooted feeling that all fishes in the wild live in perfectly stable and narrow pH ranges and fishes cannot adapt to changes in pH, and some say that fishes will perish immediately in case of any pH changes.

### What happens actually?

*In the wild*, pH is not as stable as many of us think. It fluctuates considerably. In Indian waters I have observed higher pH during day times and lower during nights. Also, pH is lower in autumn and higher in spring. In autumn, dead leaves fall and decay in watersheds leaching out acids like tannin, which acidifies the water. In spring there are more monsoon rains, hence more oxygen dissolves and therefore the pH pumps up.

*In aquaria*, pH is not perfectly stable either. pH changes in accordance with aeration, decoration, gravel, temperature, nitrate content, dissolved minerals and many more.

- Aerating 20 liters of water for 4 hours took my tap water pH from 7.8 to 8.6.
- Gravel that you use also plays an important part in your tank's pH. Any decor like corals or fossils hikes your tank's hardness and hence your tank's pH.
- Decorations like driftwood or bogwood can lower pH.

- High nitrate levels lowers pH. Don't use high nitrate levels as a means of reducing pH. High nitrate levels are highly stressful to fish.
- Water maintained under higher temperature also tends to be acidic.
- You can also observe some mild pH fluctuations during water changes.
- If you have a planted tank, you can observe considerable pH fluctuations during day and night hours. When there is light, plants carry out photosynthesis, taking in carbon-dioxide and giving out oxygen. This raises your tank's pH. At night plants respire, taking in oxygen and giving out carbon-dioxide. This reduces pH.
- Pumping in carbon-dioxide for the well-being of plants also lowers water pH.
- I have successfully housed discus, angels, rams and tetras in a 55 gallon tank for more than a year with a pH of around 8.3-8.6 and hardness way up without any problem. All these are said to be acid loving fishes but they thrive in fairly hard, alkaline water (above pH 8).

## Conclusion

So pH is not nearly as important as it is believed to be. What I would suggest is that if you intend to get so called acid-loving fish like discus or tetras don't rush or panic to bring down the pH, or in the case of Malawians don't rush to lift the pH to around 9. Stay cool and your fish can adapt to your tap water, and don't spend more on water softeners like RO units or resins or water hardeners.

I don't advocate you not to change your pH deliberately, but I would advocate you not to make alterations in pH in a panic. If you are so particular in bringing down pH you can rely on peat-filtration or a piece of driftwood. Instead of spending on RO or other resins, you can spend that money on a bigger tank. Try to keep your pH fairly stable. If you are so concerned about your fish's health, consider regular water changes. Don't panic and get into a mess as fishes face more nightmares and harsh conditions in the wild than in home aquaria. I would also advocate against using a pH lowering chemical until you know its ingredients and its working, and NEVER TEND TO INCREASE OR LOWER YOUR pH RAPIDLY.

## AQUARIUM FISH FOOD

Aquarium fish food is one of the most important topics to know about when keeping fish and a proper diet is essential. If you want to get the most out of your aquarium fish it is important to give them a variety of fish food. While you can give them just flake food, you should try to vary their diet with some of the different types of tropical fish food described below. Two or three small feedings a day is better than one feeding per day. Only put in as much fish food that the fish will consume within 2 minutes. Overfeeding your fish will lead to poor water quality and stressed fish.

Freeze-dried fish foods are a safe alternative to live fish food due to the treatment of these foods before the freeze drying process. Be extremely careful when using live foods (especially feeder goldfish) due to the diseases that they may carry.

### Automatic Fish Food Feeder



These are good to use because they will dispense the same amount of food at specified intervals, usually every 12 hours. They can also be utilized while you are away on vacation.

### Flake Fish Food



Flakes are easy to use and your fish will like it. Flakes usually float on the surface while the fish eat. If you have bottom dwelling fish like Cory Cats, you will want to use something like algae wafers or pellets that sink to the bottom. You can use flakes as the primary food source because it contains most of the vitamins, minerals and other nutrients that your fish need. They are also easy on your fish's digestive system. Start off by using just a pinch or two. If your fish gobble it up in less than 2 minutes, try another tiny pinch. Avoid overfeeding because this can lead to poor, cloudy water.

Also keep in mind that flake food does get bad if you've had it for a long time. Just imagine eating from a 6 month old box of cereal. So, it's probably best to go for the smaller flake food containers instead of the jumbo containers that will last for 5 years.

## Brine Shrimp



Brine shrimp is a great fish food for getting your fish ready for fish breeding. It can also be used as an excellent treat for your fish. Use it as a supplement to the daily diet of flake fish food.

You can also create your own brine shrimp rather easily. Check out the [brine shrimp hatchery](#) page for details on how to create a DIY hatchery.

## Blood Worms



If you have carnivorous fish you may want to supplement their diet with some blood worms. Your other fish will love these as well. Blood worms are high in protein and only feed them to your fish occasionally.

## Krill

Krill are small crustaceans that are often used to enhance the colors in tropical fish. It is not recommended to feed krill daily to your fish. Use it as an occasional supplement to their diet.

## Shrimp Pellets



Made from brine shrimp and because these pellets usually sink to the bottom, they can be used to feed your bottom dwelling fish. Brine shrimp is a great fish food and is often used to stimulate breeding in tropical fish.

## Spirulina

Spirulina is a type of blue-green algae that can be a great supplement for your fish that are primarily herbivores. What is the benefit of spirulina? It contains many amino and fatty acids that are the building blocks for proteins. It is also usually vitamin enriched. Fish such as [Plecos](#), [Silver Dollars](#) and [Mollies](#) will really benefit from a diet supplemented

with **spirulina** fish food. It should help make your fish more regular with their bowel movements.

### Algae Wafers



These fish food wafers were specifically developed for the hard to feed plecostomus and other algae eating bottom feeders. Cory cats and Silver Dollars will go after these sinking wafers as well. It can be really funny to watch Silver Dollars chase each other around the tank when one gets the algae wafer. This food can be a great supplement for the aforementioned species as well as other herbivorous fish. Drop one or two in at night when the tank lights go off for your bottom feeders. This way they won't have to compete with the top dwelling species for the wafers.

### Frozen Fish Food

Frozen fish foods are great for getting high quality, fresh food to your fish. These foods are usually high in proteins and fats so check the label to see exactly what you're giving your fish. Manufacturers are making frozen varieties of the many tropical fish food types, including brine shrimp, beef heart, bloodworms, daphnia, krill, plankton, silversides, etc. You can sometimes get the frozen fish food in cube packs that really makes it easy to dispense.

Using frozen fish food can be messy, to cut down on the amount of pollution added to your tank you may want to thaw the frozen food in a bowl and then slowly spoon feed it to your tank. Only put in as much food as your fish will eat as soon as it touches the water.

Feeding your fish high quality, frozen foods will really do wonders for them. You may start to notice that your fish have improved colors and they may even start breeding.

### Freeze Dried Fish Food

Freeze dried fish foods are great foods as well. However, they are one of the most expensive types of tropical fish foods per ounce. There are benefits to using freeze dried foods. They are not very messy, they tend to float at the top of the tank for a very long period of time and they have been decontaminated (free from fish disease) by the manufacturer before the freeze drying process. If you've used freeze dried fish food you know how fish go after them. Freeze dried food is a very good way to supplement your pet's diet.

## Live Fish Food

Live tropical fish food is exactly what you think it is. The food is still alive when you introduce it to the tank. Brine shrimp, Daphnia, Feeder Goldfish and worms are usually the main live foods given to tropical fish. Many give feeder Goldfish to their Piranhas and Lionfish. If you plan on using live foods, caution is advised because feeder fish can bring fish disease along with them.

Earth worms can be a great supplement for your fish but don't feed them to your fish too frequently. Finding earth worms can be fairly easy but make sure you don't collect them from soil that may have contaminants such as lawn fertilizer.

## BRINE SHRIMP

Live brine shrimp (*Artemia*) can be a fantastic fish food that can be utilized for many purposes. After you have been in the fishkeeping hobby for a while you may become interested in brine shrimp because you'll start to hear about it all the time. There are mainly two different varieties out there. One is the San Francisco brine shrimp and the other is the Great Salt Lake brine shrimp. The San Francisco shrimp is smaller than the Salt Lake variety and can be used to feed small fry in the early stages of development. You could then transition to the Salt Lake variety.

Live brine shrimp serves an important purpose:

- You can give them to your tropical fish as a high quality treat
- Feed them to your fry (baby fish) for quicker growth rates
- Can be used to trigger spawning and breeding behavior in certain fish species

### **Brine Shrimp for Breeding Fish**

Brine shrimp is packed with good stuff for your fish. These small shrimps are approximately 50% protein and 20% fat. If you're trying to breed your fish, whether it is freshwater or saltwater, brine shrimp can be an excellent food source for any successful larvae you produce. If you're having difficulty breeding fish, and assuming you have a pair, try giving them live brine shrimp for a few days or even a week and see if it helps.

### **How to Set Up a Brine Shrimp Hatchery**

Now that you've heard about some of the benefits of this great food source, let's talk about how to make some for your own fishes. The best part about raising your own brine shrimp is that it is fairly easy to do. First, you will need the following equipment:

- Empty, clean 2 liter soda bottle with lid
- Rigid airline tubing with air stone
- Small air pump with flexible airline tubing
- Light source
- Turkey baster
- Coffee Filter
- Brine Shrimp eggs

### **Set up your hatchery**

The amount of water to put into the soda bottle depends on the directions that come with the shrimp eggs. The San Francisco Bay brand of brine shrimp eggs is very popular and commonly found in pet shops. We'll use this product in the setup of our hatchery. According to the



directions you will want to use 1 liter of water for each 14 oz. package of brine shrimp. So, fill up the soda bottle half way with room temperature dechlorinated tap water. Empty the contents of the brine shrimp package into the soda bottle.

Next, you will need to poke a hole into the top of the soda bottle lid. Use a nail or screw slightly larger than the rigid airline tubing to poke the hole in the bottle lid. A slightly larger nail will create a hole that will allow air to escape from the bottle once we plug in the air pump. Push the rigid tubing through the newly created hole in the lid and then attach the air stone to the bottom of the rigid tubing. Then hook up the flexible airline tubing to the top of the rigid airline tubing. Finally, hook up the flexible airline tubing to the air pump, place the air stone end of the rigid tubing into the soda bottle and screw on the lid. Plug in the air pump and ta da! You have your very own brine shrimp hatchery.


Setup the hatchery near a light source to keep the water in the soda bottle warm. The warmer the water the faster the eggs will hatch. You don't want it too warm though. Try for a temperature range between 80-90° F (27-32° C). Let it sit for 24 to 48 hours and you should have a fresh hatch of brine shrimp. They are extremely small and can be hard to see. The water should look more red than brown. You may need to hold the bottle up to a source of light and watch for the tiny shrimp swimming around.

Congratulations on your first hatch. Now it's time to use the turkey baster to siphon out the brine shrimp. If you have a larger size turkey baster, you may need to cut off the top of the soda bottle to get it in there. Once you do you will want to siphon out the small shrimp and then slowly expel them into a coffee filter sitting in the sink. The water should drain through the filter leaving only the shrimp behind. Be sure to stick the turkey baster towards the bottom of the soda bottle before siphoning. The empty shrimp shells should float to the surface of the bottle. If you place a light under the bottle while doing this the live shrimp should be drawn towards the light, making it easier to collect them.

Once you've siphoned out most of the water from the bottle into your coffee filter, you should have a decent amount of brine shrimp for feeding your fish. Spoon them to your fishes and they will love you for it. If you produce too much for one feeding just put them into some dechlorinated, warm temperature water until you're ready to feed your fish. Their nutritional value does diminish as they get larger.

Obviously, this was a quick, cheap and dirty way to get your own brine shrimp hatchery setup and you'll no doubt want to experiment and modify this technique to fit your own needs. There are many, many ways you could enhance this setup. For instance you could rig a second soda lid so that it is water tight (use aquarium sealant) around a short length of rigid tubing. Then use a

airline valve that will be used to regulate the flow of shrimp. Put this new lid on the soda bottle, close the airline valve, tip the bottle upside down next to a light source and over a collecting container and then open the airline valve. Watch all the live brine shrimp flow into the collecting container. Then you could use the turkey baster to feed your fishes from the collecting container. The setup possibilities are only limited to your imagination.



## A FISH MOVING EXPERIENCE

Written By: COBC for the FishLore Magazine

### Background:

How we moved our fish cross country. In July, we were living in St. Augustine, Florida and I was offered a job in Denver, Colorado. After accepting the job, we came up with a plan for moving our fish such a far distance. Our plan was to get the Kordon Breathable Bags and double bag our fish in clean treated water with both Meth. Blue and Fish Protector added to the water. Then we'd pack the fish in a tropical fish shipping box and mail it overnight the afternoon of the day before the move. I booked a 6am flight to Denver that would have me there before the fish so that I could pick them up at the Post Office when they arrived. All the supplies were arranged for in Denver so that they could immediately be put into temp. Tanks until their tanks arrived with the moving van. All that to minimize their traveling time and stress. We even checked the USPS website for the rates to ship live fish. Well, we go to the local post office after loading the moving van and getting the fish ready in their box and they tell us that the USPS refuses to ship live animals! Silly us, thinking the post office was there to mail things - what were we thinking!?! So that left us with a box of bagged fish with no plan and about 10 hours before I had to head out to catch the flight that it was too late to cancel.. and that's how we ended up with an experience on moving fish long distance by car.

### Last minute improvising:

We went to Walmart and bought 6 small containers (for the Betta Splendens) and 4 large containers (for the Betta Mahachai and Platys) to put the fish in during nights, along with a soft cooler box to keep the fish in during days. At home we had 3 strong air pump, each hooked to a 4-way gang valve to pump air into the 10 air stones.

### Our Plan (Night Portion):

1. Set the containers out and fill them each half-way with treated tap water.
2. Place the air stones into the containers, held in place by suction cups.
3. Take the fish, 1 bag at a time, out of the soft cooler box. Unwrap the rubber band keeping the double-bag closed and float the bag in the container.

4. Once all the bags were floating, acclimate the fish using a turkey baster to add the treated tap water to the bag, evening out both temp, pH and water chemistry.
5. Release the fish from the bags.
6. Feed each fish 1 pellet.
7. Plug the air pumps into our plugged-in power strip.
8. Close the lids as far as they close without cutting off the air supply.
9. Go to bed.

### **Our Plan (Morning Portion):**

1. Unplug the air pumps.
2. Double-bag each fish with enough water to allow them to not be curled up or super cramped, tightly wrapping the bags with a rubber band and leaving little to no air in the bags.
3. Gently place the bags in the soft cooler box.
4. Unhook the air stones and put the air stones, hoses and gang valves in a sealable bag.
5. Put the air pumps in another bag, a regular plastic bag would do.
6. Empty and dry the containers. Stack them and move everything to the car.

### **Additional Notes:**

Since this was planned at the last minute, we only had enough breathable bags for double-bagging the fish with some extras in case any bags leaked. This made it necessary to use the same bags the entire time. To keep track of who went in each bag, Stacy put the bags on top of the containers at night. Had it been planned, we would have bought enough bags to use new ones each day.

The fish were taken out of their tanks Tuesday afternoon and put back into their tanks Saturday afternoon. They logged about 1,800 miles on the road and 19 of 21 fish made the trip, including a very sick Platy. (1 fish actually died before the trip started, so only 1 was lost during the trip.) I usually do the tank cleaning, setting up equipment, etc but Stacy had all this dumped on her at the last second unexpectedly. She did a great job taking care of them and I really was happily surprised that we only lost 1 fish on such a long and stressful trip!

### **Water Treatment:**

The water the fish were bagged in was clean treated tap water treated with both Methylene Blue and Fish Protector. Both products are made by Kordon. Do everything that could result in water spilling, dripping, etc. over plastic garbage bags or something you don't care about seeing blue forever!

Each night, the water in the containers was treated with 1 drop of Prime, 2 drops of NovAqua+, 1 drop of Fish Protector and 1-2 drops of VitaChem.

### **Where We Got Everything:**

The rubber bands, 5-outlet power strip, containers, soft cooler box and air pumps (the kind with 2 outlets on them for about \$10 each) came from Walmart. You could get a small pair of scissors to help remove the rubber bands, if you feel you'd need it.

The Prime, NovAqua+ and VitaChem were ordered at the DFS website (<http://www.drfostersmith.com>) - Prime and NovAqua+ should be available locally, but the VitaChem most likely will need to be ordered online so ordering the Prime and NovAqua+ with it would save money without increasing shipping costs.

The 4-way gang valves came from Petco, but could also be ordered at the DFS website.

The air stones and air hose could be bought at Walmart, most fish/pet stores or the DFS website.

The Fish Protector was ordered at the [Pet Mountain website](#).

### **Be Sure:**

Be sure the containers are strong enough to hold the water. Most are, so this shouldn't be a problem. Testing them in advance would be a good call.

Be sure the insulated cooler box is all soft with no hard parts in it, more like a bag, just in a box shape.

Be sure to take the cooler box in with you and never leave it in the car.

Well, that's our wild plan that somehow worked. Should the temps be really hot or really cold, you may need either ice or heat packs. The cooler box will help, but you just want to do your best to keep their water as close to normal as possible.

## About the Author

Dave started in the wonderful world of Bettas and fishkeeping the Saturday after Christmas 2006. I gave Stacy a Betta for a Christmas Present (Super Mario) and after a rocky start we found what a great community FishLore is and now we have 6 betta splendens, 7 betta mahachai, 4 balloon platys, 4 platys, a roque gang of shrimp and a partridge in a pear tree (well one of the bettas ate him last night) in 9 tanks.

## FRESHWATER FISH DISEASE SYMPTOMS AND TREATMENT

Below you will find some of the more common freshwater fish disease along with their symptoms and treatment.

Freshwater fish disease page where we provide the common name, symptoms and treatment options for your sick freshwater fish. Before you use any medication on your tank make sure that you have properly diagnosed the freshwater fish disease and try to figure out why your tropical fish have the disease or problem to start. Many diseases are brought on by the fish being stressed due to transport or water quality issues. If you've just set up your tank, please read about new tank syndrome.

It's a very good idea to have a small quarantine tank for new fish so that you may monitor the fish for a few weeks before adding the fish to your main tank. You can also use the quarantine tank for your fish that come down with a freshwater fish disease and can avoid adding chemicals to your main tank. Always practice good fish acclimation techniques and don't rush things.

Try to determine the underlying problem before medicating. Often times there are water quality issues that need to be remedied first. Get and use an aquarium test kit and take the appropriate measures to correct the water in your aquarium.

Whenever you use any type of medication on your tropical fish, first remove any carbon in your filtration system. If left in, the carbon will remove the medication from the water, doing you no good. Read the directions on the medication bottle very carefully!

To sum up, first determine the cause of the freshwater fish disease, fix any obvious problem(s) (water quality problems and/or tank mates), figure out which disease your fish has by closely observing the symptoms and then treat if necessary.

### **Ammonia Poisoning**

Red or inflamed gills. Fish are gasping for air at the surface. New tank setup or a tank with too many fish.

Ammonia poisoning is easily preventable. Avoid adding expensive and less hardy tropical fish until the aquarium has cycled. For more information on cycling your aquarium please read about the aquarium nitrogen cycle. You can use a substance called zeolite to help absorb ammonia but the best solution is to ensure that your aquarium has cycled and that your tank is

not overcrowded. If your tank has not yet completed the nitrogen cycle, you will need to perform frequent water changes to keep the ammonia levels down.

### **Dropsy or Malawi Bloat**

Bloated fish, scales are raised, possible loss or lessening of body coloration.

This is not really a disease, but a symptom of a bacterial infection and possibly malnutrition. There are medications available but try to increase the quality of the water by performing a 25% water change every other day and increase the quality of fish food given. If your fish's condition doesn't improve, try the medication. Your local pet store should have medication for this disease. Remove any carbon filtration before using medication because the carbon will remove the medication from the water.

### **Ich, Ick or White Spot (Ichthyophthirius)**

Small white spots showing up mainly on the fins but also on the body. It looks like your tropical fish has salt all over it. More information on Ich

This is a fairly common fish disease and your local pet store should have medication you can use. Ich usually arises due to poor water quality. You can increase the temperature of your water to 82 degrees Fahrenheit to speed up the cycle time of this parasite. Remove any carbon filtration before using medication because the carbon will absorb the medication. Easily preventable by using a quarantine tank for a few weeks before introducing new arrivals into your main tank.

### **Fin Rot**

Rotting fins, loss of appetite and laying on the bottom of the tank. This is due to a bacteria that infects the fins of the fish. It is sometimes brought about by bullying from other fish and fin nipping. Most often it is due to poor water quality.



There are medications available such as Tetracycline from Mardel Labs. Remove any carbon filtration before using medication because the carbon will absorb the medication. Before using medication though try increasing the quality of the foods you are feeding your fish, separate them from any fin nippers and step up your water change schedule. More information on [Fish Fin Rot](#)

## **Fish Fungus**

Cotton like growths on the body that may appear white or gray in color.

Be sure to give your fish the best water you can by performing frequent water changes. If your fish gets a disease they may develop secondary fungus infections. Medications such as Jungle Labs Binox Crystal will treat fungus problems. More information on [Fish Fungus](#)

## **Hole in the Head - HITH, sometimes referred to as Head and Lateral Line Erosion - HLE**

Small holes or indentations on the head of fish, advanced cases may show markings along the lateral line of the fish. They may stop eating.

There are many theories out there, but no conclusive scientific evidence as to what exactly causes this disease. However, it may be attributed to poor water quality, lack of proper nutrition and/or the use of activated carbon for prolonged periods. However, there have been no scientific studies about the effects of the prolonged use activate carbon causing hole in the head, it's just speculation. Be sure to give your fish the best water that you can by performing frequent water changes. Give them vitamin enriched foods and change out or stop using activated carbon.

## **Nitrite/Nitrate Poisoning**

Tropical fish are lethargic or resting just below the water surface and you are getting high readings on your nitrite and nitrate test kits.

Nitrite / Nitrate poisoning is not a disease but will kill your tropical fish if not remedied. It results from having a large bio-load on the filtration system or from not performing enough water changes. Perform a partial water change immediately and monitor the nitrite and nitrate levels closely until the situation is resolved. You may have too many fish in the tank and will need to perform more frequent water changes. Nitrite readings on your [aquarium water test kit](#) would indicate that your tank is still in the aquarium nitrogen cycle nitrite phase, or it is undergoing a mini-cycle if you've recently added more fish to the tank.

### Oxygen Starvation

Most or all of the fish are usually found at the water surface. They may be gulping at the surface with their mouths.

Check the temperature of the water. Higher water temperatures require higher levels of oxygen. You will need to increase the aeration in the tank with air stones and/or powerheads and increase the flow rate with your filters. Try to decrease the temperature of the water by floating ice cubes in plastic baggies and turning off the [tank light](#). If sun light is entering the tank from a nearby window, try closing the shades. Also, if you have an overcrowded aquarium you will definitely need to increase the aeration in your tank.

### Pop-Eye

One or both eyes appear to be, protruding abnormally, "popping" or sticking out.

This is usually the result of a bacterial infection. Try to give your fish the best water possible by performing frequent water changes. To treat this problem you can use a treatment such as Tetracycline from Mardel Labs. If possible, increase the quality of food given. Supplement with vitamin enriched foods. More information on [Fish Pop-Eye](#)

### Swim Bladder Disease

Fish have a difficult time staying upright and may hang in the water. [Goldfish](#) are especially prone to problems with the swim bladder.

Some hobbyists feed their fish peas to treat this infection. Perhaps this works by helping in the digestion process. Try this: stop feeding the fish for a few days, give the fish optimal water conditions by performing frequent small water changes (10% every week) and see if the problem clears up.

## **Velvet (Oodinium)**

Velvet looks a lot like ich but velvet shows up as smaller yellow or gray dusty spots on the fish. Tropical fish with velvet will have rapid gill movement and may be rubbing on surfaces in the tank.

There are a lot of products out there to treat this common tropical fish parasite. For example, Aquarisol works on ich and velvet. This is easily preventable by using a quarantine tank before introducing new arrivals into your main tank.

**By Terry Ranson**

*From Vol. 2, No. 2, The Newsletter of The Tri-State Aquarium Society, January 2000*

Courtesy: [Aquarticles](#)

Probably the most common disease among fish is ich. But, what do you really know about this organism?

Ich is short for the name of a ciliated protozoan of the genus *Ichthyophthirius*. Ich is usually present all the time in aquaria in small numbers, just like germs are in the air we breathe. However, when a fish suffers from extreme stress, such as a sudden drop in temperature, its resistance is lowered and it becomes vulnerable to diseases. Ich outbreaks also occur after the introduction of new fish to an established aquarium.

Ich is free-swimming until it attaches itself to the skin of a fish. Under a microscope, the organism is easily seen and identified, even under low magnification. It looks like a round, rolling mass. According to John Gratsbek, et al, in the book *Aquariology, The Science of Fish Health Management* (Tetra Press), ich is one of the few fish parasites completely surrounded by cilia. The organism's U-shaped nucleus is often visible under a microscope.

Once the free-swimming ich reaches a fish, it attaches to the outer layer of the skin of the host fish. The ich organism then forms a tough outer shell, or cyst, while it feeds on the fish's bodily fluids. This encysted stage, called a theront, grows large enough to be seen with the naked eye. Each theront appears as a tiny white spot on the fish. Severe ich infestations make fish appear as if they are covered with salt. After the theronts grow to a certain size, they break through the skin and drop off the fish. As they fall, they attach to the bottom or sides of the aquarium, or to plants, gravel, decorations, tubing or any other stationary object. Theronts then begin their reproductive stage, and are then called a trophozoite, also known as a trophont. The attached trophozoites then begin producing the infective, free-swimming stage. Hundreds more free-swimming ich organisms, called tomites, can arise in less than a day and a half, and they in turn re-infect the fish in your aquarium.

In nature, ich is not much of a problem. There are large numbers of fish to which tomites can attach. And with the greater amount of water volume, it's likely that many ich organisms do not even find a host. However, in a closed system like an aquarium, ich re-infects the same fish over and over, resulting in severe infestations. That's why it can be such a problem.

While ich is encysted on the fish, no medicine can affect it. But once it's free-swimming, it can be killed. Since the life cycle of ich takes at least three days at 80 degrees to complete, ich must be treated for at least four days. I prefer to treat for a week.

**Although many aquarists use rather harsh chemicals to kill off Ich, I prefer more natural methods:**

- Ich dislikes warm water, so I immediately bring the water up to 85-88 degrees.
- Since warm water cannot hold as much oxygen as cool water, I also increase the aeration by adding air stones. Another reason for added aeration is that ich infects the gills of fish as well as the outer skin. We only see ich on the skin of fish, and assume that's what's making them so sick. But my personal belief is that gill infestation by ich is the main cause of suffering and death in aquarium fish. I believe this damage to the delicate gill tissue suffocates fish, which either kills them outright or leads to lethal secondary infections. An increase in dissolved oxygen brought about by vigorous aeration may mean the difference in life or death to your fish.
- Along with a temperature change and added aeration, I usually add about one teaspoon of canning and pickling salt per gallon to the water to help the fish recover from the stress caused by the disease by reducing osmotic pressure, enabling the fish's own immune system to fight back. Salt is also harmful to ich.
- Water changes are extremely important in fighting ich outbreaks. Using a gravel washer, I do a 50 percent water change on a daily basis. This eliminates a great number of trophozoites and tomites from the aquarium.
- While I prefer not to use chemicals to treat any disease, developments over the past few years have left me little choice. The ich we contend with today are particularly virulent strains because, in my opinion, so many hobbyists, and, more importantly, pet shop owners/employees, have used chemicals and antibiotics instead of good hygiene to treat disease. What I refer to as hygiene is simply hard work: i.e. water changes, heat, added aeration and salt. When that is insufficient, I use Rid-Ich, which is a commercially available medicine consisting of zinc-free malachite green and formalin. I've found this to be highly effective in treating ich.

If your fish recover from ich, they may not get it again. There is evidence that fish become resistant to ich after they survive the initial infection, so fish which recover from an ich infestation should be less likely to contract the disease at a later time. However, I would still recommend a three-week quarantine period for all newly purchased fish.

**By Kent Cannon**

Editor's note: Kent Cannon, otherwise known as 'Cichlid 102', has kindly given us permission to reprint this article.

### Aquarticles

When you walk up to the tropical fish medication display at your local aquarium store, are you confused as to what to buy? What should I have in my medicine chest for that occasional disease that pops up, you might ask. How do I diagnose the disease that my fish seems to have? And what causes it? How am I supposed to know what I am supposed to buy when I can't even pronounce the name on the package? How do I know what symptoms point to what disease? Where do I find information that will help me answer some of these questions? If you've found yourself asking one or more of these questions, then you are not alone! Most of us are not used to treating disease we rely on doctors to do just that for us! In most cases, finding a doctor to treat that sick fish is a rather pointless undertaking. By the time you get the fish to the doctor, the fish has undergone so much stress from netting and transporting that it is going to be a goner anyway! That leaves us back on page one. In this article I am going to try and help you answer some of those tough questions.

Where do I start? What should I have on hand, and where do I find the information to make an educated decision as to how to treat my fish?

- The best place to begin is with a quarantine tank. This tank does not have to fit any special qualifications except that it needs to be large enough to handle the fish that you are placing in it. In the case of disease, it is better if the tank does not have gravel or a UGF (under gravel filter). That makes it easy to clean while it is being used, and easy to sanitize when the need for the quarantine is over. You will need an air stone or other means to cause surface turbulence to oxygenate the water (many treatments deplete the available oxygen) and a means of mechanical filtration (sponge filters work great). I have a ten-gallon tank for this purpose. I leave it out in the storage shed for just such an emergency. If you keep an eye open, you will be able to pick one up for as little as ten dollars at a yard sale or in the want ads.
- The next thing that I would advise you to have on hand is a good fish keeping manual or book that has a disease section. Or better still, a book dedicated to diagnosing and treating tropical fish disease. Look at used bookstores and yard sales. You can also buy

them through your local bookstore or aquarium store. There are also a number of places online that carry them. Here are some books to consider:

- *A to Z of Tropical Fish Diseases and Health Problems* by Peter Burgess, Mary Bailey, and Adrian Excell.
- *Handbook of Fish Diseases* by Dieter Untergasser
- *Fish Diseases: A Complete Introduction* by Gottfried Schubert
- I also keep on hand a few drugs and odds and ends with which to treat common diseases and problems. Remember that many drugs have a rather short shelf life, so do not keep on hand antibiotics. It is also a good idea to buy your drugs at a store that has a high turnover. I buy mine at one of the larger chain stores simply for that reason, while buying for my normal fish needs from my favorite aquarium store. I do keep on hand some aquarium salt (I'm going to get flamed for that one), Quick Cure (Malachite Green), Clout, Furanace (Nifurpirinol), and/or Fungus Eliminator by Jungle Products. I also keep on hand some Epsom-salt, which you can find at your local grocery store. You will want to keep all of the drugs that you use for your fish in a place that is free from moisture and temperature extremes.

Now that you have your fish hospital and basic medications all set up, let's move on to understanding symptoms. How is your fish behaving? How does it look as opposed to normal? Is it hiding or is it sitting on the bottom? Is it free swimming or is it stationary with fins held tight to its sides? Does it lean to one side, or does it have its head towards the surface or towards the bottom? Does it eat, and if it does eat does it spit out the food after a few moments? Is only one of your fish sick or are all of the fish in the tank sick? These are just a few of the questions that you will have to answer in order to treat your fish. Below are some of the common terms for symptoms used to treat almost all fish diseases:

- ***Clamped fins*** - Fins held to the body, not swimming naturally.
- ***Flashing*** - Scraping up against the decorations in the tank. Many fish do this occasionally, but when they do it continuously you need to pay attention.
- ***Head standing*** - Swimming with the head down

- **Tail standing** - Swimming with the tail down
- **Lethargy** - Seems to have no energy stay in one spot, usually in a remote part of the tank
- **Listing** - Leaning to one side or the other
- **Fin shredding/splitting** - Fins look ragged and the spines within the fins can be exposed.
- **Scales sticking out** - The scales on the fish stick out at a right angle to the fish's body.
- **Red Sores** - Where are the sores? What do they look like? Are they red on the outside, or white on the outside and red on the inside?
- **White spots** - Are there small white spots everywhere, or are there only patches of white that are in certain areas, like around the mouth?
- **Is the anus protruding and red?** The belly of the fish should be in a smooth line (look at one of your healthy fish).

Many of these symptoms can be together or separate. You need to determine the sequence of the symptoms and which are involved with your particular fish. All of these things together will help you to properly diagnose what is happening to your fish so you can properly treat it. Every time you feed or look at your tank, pay attention to your fish! How do they normally act? Once you get good at picking out proper behavior, you will be better able to pick out fish that are healthy the next time you go to your LFS.

I am just going to touch on treatments in this article, although I do hope to do a follow-up at a later time. When you spot your fish acting strangely, the first thing that you want to do is check the water parameters. Check the ammonia, nitrite, and nitrate levels. Check the temperature and the pH. The most common cause of all problems in a fish tank is poor water conditions. Do a 20-30% water change and see if your fish start to behave in a normal manner. If you still have a problem, then you need to decide whether to isolate or not depending on the symptoms. If you catch many problems early you can save yourself a lot of worry!



Some of the common diseases are found in the next portion of this article. You can combine the symptoms given earlier with the descriptions of the following diseases to treat many of the maladies that are common to the aquarist.

- ***Anchor Worm or Lernaea*** - Symptoms: An ulcer develops where the worm attaches; secondary infections may also occur around that point.
- ***Bacterial Infections*** - As bacterial infections usually are due to poor water quality, it is imperative to first remove the primary cause. It is also important to remember that true primary bacterial infections are relatively rare, while most often problems are due to water quality or parasites.
- ***Columnaris*** - A bacterial infection caused by *Flavobacterium columnare*. Fish with *Columnaris* usually have brown-to-yellowish-brown lesions or sores on their gills, mouth skin, and/or fins. Shallow skin lesions usually appear as patches that have lost their shine. Check for mouth and anal vent for sores.
- ***Costia*** - *Costia* is a parasite that nearly always causes little red hemorrhages, especially under the chin, but also along the back. If the red dots are under the scales, it is probably a bacterial infection.
- ***Dropsy*** - Symptoms: Scales protruding at a 90° angle to the body; reddening of the vent area; and long, stringy feces. Euthanasia may be in order.
- ***Gyrodactylus dactylogyus or Gill Flukes*** - Symptoms: Fish will consistently flash and rub as the infestation becomes more advanced, the fish will become lethargic
- ***Hexamita or Hole in the Head disease*** - Common in all fish, but these protozoans are particularly deadly to cichlids. They infect the digestive tract and are associated with head and lateral line erosion. Symptoms: Fish will exhibit a marked decrease in vitality, darkened colors, lack of appetite, and slimy whitish-to-clear feces.
- ***Ich*** - *Ich* is primarily a cutaneous infection of freshwater fish caused by the protozoan parasite *Ichthyophthirius multifiliis*. *Ich* most often causes the appearance of small white spots over the body and fins of fish. (Note that *Ich* can be present with many different appearances, and that other things besides *Ich* can cause small white spots on the body).

- **Malawi Bloat** - Caused by feeding high protein diets to Rift Lake Cichlids. A majority of Rift Lake Cichlids are primarily vegetarians subsisting on mainly algae and other plant growth. Their intestines are extremely long in order to break down their common food (algae). When high protein foods such as bloodworms are fed in a frozen state and a dominant fish is able to grab large chunks of unthawed food, the food can sour in the fish's intestine and start a systemic biological infestation of the intestine. The first sign of this disease is lack of appetite (which in a Rift Lake Cichlid is readily apparent). This, coupled with lethargy and staying in its cave or a corner, is a sure sign of this terrible disease.
- **Nematode worms** - Characterized by a thin, thread-like worm coming from the anus of the fish. The fish can become bloated, listless, and or skittish.
- **Oodinium or Velvet disease** - Oodinium is a parasitic disease. Infestation causes a velvety texture all over the fish, or just in small patches.
- **Tuberculosis** - The bacteria that cause fish TB is known as Mycobacteria marinum. Fish TB is not very contagious, and, as a result, if symptoms are noticed early it will not have an effect on the other fish in the aquarium. Symptoms include the following: loss of appetite, fish remains in seclusion and out of site, rapid breathing (respiration), and eyes appear to be cloudy or "popping out," fish lies on its side near bottom of aquarium, stomach of fish appears to be sunken, white blotches on exterior, degraded and frayed fins.

As you can see, when you combine the symptoms with the various diseases and infestations, a pattern develops. As you become more adept at picking out the symptoms you can shortcut the disease and save yourself and your fish a lot of misery. It is too hard to touch on the many maladies that can affect your fish in one article. Hopefully, through the course of this article you have learned enough to start diagnosing the diseases that affect your fish.

### Fish Pop-eye (Exophthalmia) - Symptoms, Causes and Treatment



Fish Pop-eye in itself is not a disease but is more a symptom of an underlying infection. The fish eye bulges out in this manner because of fluid buildup, either behind the eye or in the eye itself. The first signs you will notice is that one or even both eyes are starting to bulge. Slowly with time it can bulge to such an extent that the fish will look really shocking with the bulge.

The bulging eye may have a thin layer of 'skin' around it, this is a tough tissue that covers the eye keeping it in the socket and as the eye bulges it stretches the 'skin' with it. The fish may also get less active and show no interest in food. Fungus infections can show up afterwards.

If this disease is not detected soon after it is caught the fish can lose one or both of its eyes and its eye sight. Any impact the eye might be subjected to generally as a result of fighting, can cause this. If its one eye chances are its injury, if it's both then it is possibly a bacterial infection. Bad water quality is a common reason enough to be the cause. High nitrites/nitrates, ammonia, metal or plastic poisoning can be the reason too. Unsuitable salinity can also be the cause.

Bacterial infections, injury and water quality are the most common problems. Vitamin A deficiency, tumors and gas embolism are less common reasons. Pop eye can also be caused by gas bubble disease as a result of oxygen super saturation (excess levels) of the water with the gas, nitrogen. Super saturation occurs whenever the pressure of a gas in the water is higher than the pressure of the same gas in the surrounding atmosphere, whereby the difference in gas pressures causes the gas to get pulled too quickly out of the fish's bloodstream, leaving behind gas bubbles. The other symptoms of this are the appearance of bubbles under the fish's

skin. It's caused by excess oxygen in the water, particularly from filters that blow air directly from outside to inside the tank, and from pressurized tap water that did not get mixed.

### Pop-Eye Treatment

The affected fish should be immediately taken out to be separately treated. It is difficult to specify a specific treatment unless the main cause is definitely known. Large daily water changes should help, if not Epsom salts has been used with good results to draw the fluid out. One tablespoon per 5 gallons of water for at least three days, longer if necessary. Epsom salts isn't really salt (sodium chloride) it is Magnesium Sulfate. If water quality is the problem, a 50 percent water change must be made as soon as possible.

If a new item was added to the aquarium recently, it should be double checked that it is not poisoning the water or letting off chemicals. The quality of the water conditioner that is used should be checked that it has a good opinion by other aquarists. If the water readings are wrong (high nitrates etc), a 50 percent water change is recommended again and 15-20 percent water changes 3-5 times per week, until the water readings are correct.

Overstocking is a common problem for high water readings. Another common reason would be decaying dead fish and fish food. The tank should be thoroughly searched for any dead fish and precautions must be taken **NOT TO OVER FEED**, and if the tank is overstocked, steps should be taken in finding some of your fish another good home. If a bacterial infection is the cause we would recommend 'Maracyn', 'Maracyn II', 'eSHa 2000' and 'Anti-internal bacteria' for treatment.

### What is Fish Fin Rot?

Fish Fin rot is a bacterial disease that commonly affects aquarium fish. Fin rot is also a disease that can easily be prevented by maintaining correct care for the fish and at the same time very easily caused by incorrect care, such as, bad water conditions and injury, one way or the other. Fraying or torn fins, enflamed fin base and, if not treated in time, the fin rotting away are symptoms of this disease. White may appear on the affected parts which is generally bacteria. As the disease advances the fins will get notably shorter, becoming red and enflamed along with bloody patches.

### What Causes Fish Fin Rot?

Poor water conditions are the main causes for this disease. The stress from bullying and fins being nipped by other fish resulting in injury are also common reasons for fin rot. Overcrowding, over feeding, lack of weekly water changes and decaying matter are some other reasons for bad water conditions. Aggressive tank mates, generally, the larger fish and fish that are famous for nipping can result in fighting and nipping, whereas injury is sure to follow. Sharp edged decorations can tear and injure fish and their fins. Fish seem to enjoy water changes but skittish fish dashing against the decorations and sides of the tank can cause injury, so gentle water changes are in order.

### How do I Treat Fish Fin Rot?

Maintaining proper care is vital for a healthy aquarium. Weekly water changes, monitoring the water chemistry (nitrate, nitrite, ammonia, pH) as well as checking for decaying plants, food etc. should be done at least once a week. When introducing new fish, be sure to observe that they are settling in nicely and that there is no aggression. Quarantining new fish is recommended for easier observation for disease. Treatment has to be applied before the disease reaches the fish's body as this will lead to death.

When fin rot is detected check that your water conditions are in order. A 50% water change should be made and the rest of the fish should be checked for any signs of the disease. The affected fish should be removed and put into another tank and treated separately. Most medications recommend not doing water changes during treatment so a 50% water change before starting is advised. The temperature should be raised to 80-82°F (26-27°C) and the water kept extra clean. After the treatment another 50% water change must be made to help clear the medicine and thereafter 10-15% every other day for a week while monitoring the fish.

According to our knowledge the use of the following medicines will help cure the disease. Maracyn, Maracyn II, Waterlife- Myxazin, MelaFix, and for betta's Bettafix. Alternatively the use of Methylene Blue too can be used. 1 Drop per 2 gallons of aquarium water is our choice. While treating with Methylene Blue, a 50% water change every other day for a week is recommended, the main reason being, as mentioned before, clean water is essential and helps with the healing. When using Methylene Blue be sure not spill any as it stains.

Treatment should always be carried out to completion and affected fish observed.

MARIMO MOSS BALL - AEGAGROPILA LINNAEI



**Common Name:** Marimo Moss Ball

**Latin Name:** *Aegagropila linnaei*

**Sold as:** Circular Moss Balls

**Tank Placement:** Foreground

**Max Size:** 8-12 inches

**Temperature:** 60-86 degrees

**pH:** 6.0-8.5

**Growth Rate:** Extremely Slow

**Propagation:** Division

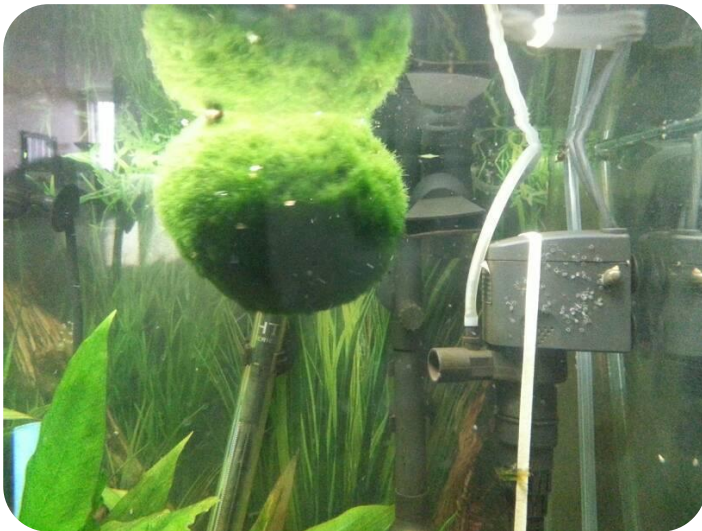
**Lighting:** Any

**Supplements:** Not necessary

**Difficulty:** Easy

**Good for Beginner:** Yes

**Author:** AmazonPassion



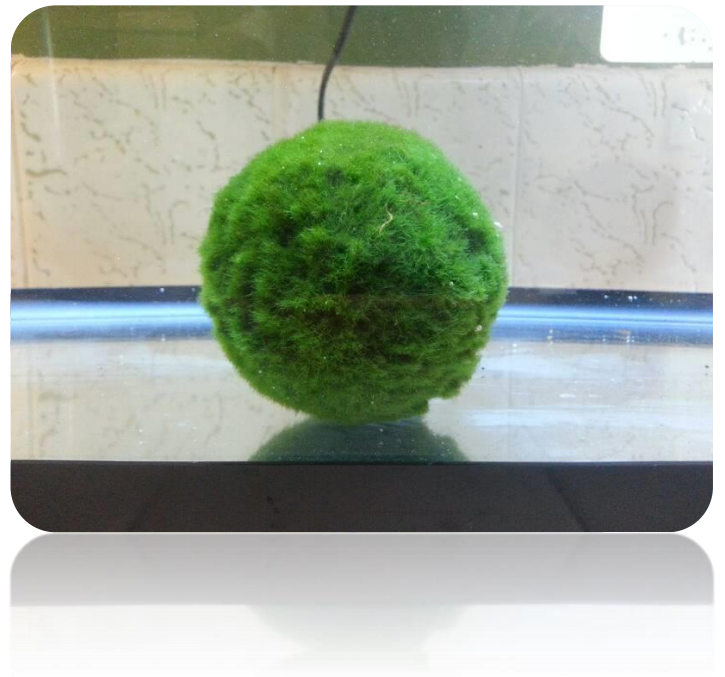


When I first got them over 12 years ago, I used to take these marimo moss balls out of the aquarium once a month for 24 hours and place them in a container (bucket) and dose with fertilizers for the Marimos to absorb the nutrients.

Now, I just do monthly maintenance, squeeze the water and let the marimo float in my tank. This is my way to simulate their natural environment by letting them rotate so all the sides receive light. If neglected on the bottom of the tank, the part of the Marimo that sits on substrate will turn brown due to lack of lighting.

### Some No-Nos based on my experience:

1. They don't do well with bleach and hydrogen peroxide dips
2. Placing them in direct intense (summer) sunlight in small containers will burn them if kept there to long.
3. They are known to carry hitchhikers so I would QT new ones especially if they were grown in ponds.



## CERATOPTERIS THALICTROIDES - SUMATRA FERN, ORIENTAL WATER FERN, WATER SPRITE

Author: mosaicguppy



*Ceratopteris thalictroides* commonly known as Sumatra Fern; Oriental water fern, Water sprite are fast growing plants originating from slow moving waters in tropical regions. This is a very hardy plant that will adapt to most water conditions and due to its fast growth, the perfect plant for filling in any extra space in the aquarium.

This plant is very easy to grow and can be grown either planted in the substrate or left floating. Older plants will turn brown and new plants will grow on the older ones, they can be taken off and planted in the substrate. Cuttings from this plant can also be planted or left floating. Can be grown with both sand and gravel as the substrate.

This is a tall (growing up to 60 cm or more) plant best suited for tall aquariums and must be trimmed often to keep tidy. This plant doesn't require much light to grow but grows faster with more light offered.

Other names for the plant include water sprite and Indian fern

Pics:

[http://www.plantgeek.net/plantguide ...es&type=Search](http://www.plantgeek.net/plantguide...es&type=Search)



## PURPLE CABOMBA, RED CABOMBA, PURPLE FANWORT

Author: catsma



**Common Name:** purple cabomba, red cabomba, purple fanwort

**Latin Name:** Cabomba pulcherrima

**Family Name:** Cabombaceae

**Plant Form:** Stem

**Sold as:** Bunch Plant

**Placement:** Background

**Max Size:** 24 inches/60 cm

**Plant Location:** In substrate or floating

**Flowers:** White to Lavender

**Propagation:** Cuttings

**Growth Rate:** Fast

**True Aquatic:** Yes

**pH:** 7.4 or lower

**Supplements:** Iron, CO2

**Lighting:** Moderate to High

**Care Level:** Moderate

**Good for Beginners:** No

Very fine leaves grow in whorls along the stem length. The more light and the more iron the

darker the red/purple color develops. A great plant to bring color to a planted tank.

Plants are not for beginners as they need a solid supplement schedule and constant CO2 supplements to stabilize in a tank.

## AMAZON SWORDS

Author: catsma



**Common Name:** amazon sword

**Latin Name:** Echinodorus amazonicus

**Family Name:** Alismataceae

**Plant Form:** Rosette plant

**Sold as:** Bare root or potted

**Placement:** Background

**Max Size:** Most resources indicate up to 20 inches/50 cm; however, plants grow into tank busters over time, reaching above 30 inches/76 cm

**Plant Location:** In deep substrate

**Flowers:** Inconsequential; so small that flowers are rarely noticed

**Propagation:** Divisions and pollinated flowers

**Growth Rate:** Moderate to fast

**True Aquatic:** Yes

**pH:** 7.5 or lower

**Supplements:** High quality fertilizer and Root Tabs

**Lighting:** Moderate to High

**Care Level:** Moderate

**Good for Beginners:** Yes

Probably the most common sword plant on the market today. These plants grow into huge tank busters! I have a sword that is 2 years old that is producing many baby plants and takes up 1/4

of my 90G tank and is growing out the top of the tank. Definitely not a plant for a smaller tank!

Root ferts are a must. These plants are extremely heavy root feeders and will also remove ferts from the water column. It can be difficult adjusting to accommodate a fast growing amazon Sword plant's needs.

Because of their size these plants are best as a single specimen and needs a very large tank to enjoy their full beauty.

## BANANA PLANT

Author: Aquarist48



**Common Name** - banana plant so named due to the fact the roots appear to be shaped like bananas. The banana shaped roots contain and store nutrients that the plant needs.

**Proper Name** - *Nymphoides Aquatica*

**Care Level** - Easy/Medium

**Lighting** - Medium/Moderate currently using T5 HO 28W 6700K (lighting may vary depending on the size and depth of your aquarium)

**Plant Size** - I've seen 6" mentioned but mine is already to 8" and still growing. The leaves are double the size of a .50 piece. Too, some information states the leaves will reach the top of the aquarium and float like a lily pad on top of the water.

**Water Temperature** - Suggested 70 to 80 degrees. I keep all of my tanks at 80 degrees and this plant is thriving.

**Fertilizer** - Currently using Flora Pride every 10 days, seachem Root Tabs every 6 to 8 weeks.



Too, I filter all of my water through fluval Peat Pellets.

**Growth Rate** - Slow for the first few weeks, then the plant gets a growth spurt once it's established. A new stalk will appear for the bloom after about 2 months or so. So far, the stalk that I have is about 14 to 16 inches and I'm still waiting for the bloom. It should bloom any day now.

**The Bloom** - Is said to be like a snowflake, white with 4 to 5 petals and should bloom for several days.

**Placement** - I think these plants look great anywhere in the tank. Grouped together, the roots entwine along with the leaves. Some of the roots may work their way above the substrate which is fine. No need to bury any exposed, longer, roots.

**Propagation** - From information that I've seen, you can simply remove a leaf with the stalk and place it in the substrate. Too, some banana plants may form additional bunches of bananas at certain times of the year.

With the correct lighting and some additional fertilizers, this plant has been very easy to grow and would be easy for beginners.

**Pruning** - Simply remove any dead leaves at the base of the plant, clip it close to the banana bunch.

**pH** - My plants are thriving with a tank water pH of 7.8. I would think this plant would do well anywhere from 7.0 to 8.0. DrsFosterSmith has listed 6.8 to 7.2. I've never tried plants in acidic water.

Talk to your plants "Grow baby grow"!

Link to my Banana Plant Progress Thread:

<http://www.fishlore.com/fishforum/aq...2-18-12-a.html>

## APONOGETON ULVACEUS

Author: Catsma



**Common Name:** aponogeton ulvaceus

**Latin Name:** Aponogeton ulvaceus

**Family Name:** Aponogetonaceae

**Plant Form:** Bulb

**Sold as:** Bulb

**Placement:** Background

**Max Size:** 24 inches/60 cm

**Plant Location:** Planted in substrate

**Flowers:** White, yellow or purple on 3-4 foot stems

**Propagation:** Seeds or adventitious plantlets

**Growth Rate:** Very Fast

**True Aquatic:** Yes

**pH:** 7.5 or lower

**Supplements:** Quality fertilizer, Root Tabs, CO2

**Lighting:** Prefers High to Very High, but can be grown in low moderate light

**Care Level:** Moderate

**Good for Beginners:** Yes

Stunning plant grows very quickly, as much as 3-5 inches a day, under high light and easily flowers. Leaves are elongated with a wavy edge. This is a true tank buster!

Plant has been hybridized and it is unknown which species you have without looking at the bloom color. A true *Aponogeton ulvaceus* is actually quite rare. Most hybrid species sold today require a dormancy period; however, the purple flowering plants do not require it.

To force plant into dormancy:

When plant growth greatly slows and plant begins to die back naturally, remove from aquarium and prune off roots and leaves. Set bulb into a water tight container with cold water. Leave it in a cool, dark place for a month or two. Then return to the aquarium and surround with root tabs. Plants will quickly take off and grow very lush again.

## ANACHARIS

Author: fishy\_friend2



common name - anacharis, freshwater seaweed, elodea

proper name - egeria densa

origin - south america Mexico, North America, East Africa, Australia, New Zealand, Japan and Europe

category - Stem

care level - extremely easy

lighting needs - can grow with almost any light source, I have successively grown it in low, mild, high, and extremely high light with it doing well in all of the light sources

temperature - 28 - 82 from personal experience, it does much better in lower temperatures and should be in a max of 74 degrees

position in aquascape - mid to background as this is a fairly tall aquarium plant

pH - these are extremely invasive plants in the wild being most adaptive to high PH's and low PH's so as long as you don't go below 5.5 or above 8.2 your anacharis should do fairly well, likes higher PH

hardness - it has been known to grow in a fairly large range from soft to hard water but so as you don't go above 23 you should be fine


propagation - it is propagated from small cuttings of the stems

needs added Co2 - no but will most certainly benefit from it

needs added fertilizers - no but will most certainly benefit from it, if you do decide to add extra ferts, make sure that you add liquid ones as root tabs will become useless as this plant is a water root feeders, as in it obtains most of its nutrients from the water roots that it sprouts out of the sides of the plant

bio - anacharis is a very popular aquarium plant that is readily found at most places that sell aquarium plants. This plant has small slender, green leaves that range in the hundreds on one stem, if planted correctly in a compact position it can almost look like a very attracting underwater bush. I recommend that you plant it this way as it looks magnificent, the fish love it, it helps protect fry, and it helps with establishing territory among the fish. This plant appears like underwater seaweed almost, it has a very pretty dark green color to its body. it also grows to enormous heights under the right conditions meaning tall tank, etc. anacharis it is almost like a huge ammonia, and nitrite mop. it will clean the tank water, but don't depend on this plant for water changes or perfect water conditions, it will help but not do everything for you.

## NOTES

 Originally Posted by **Elodea** 

*There are a few things I believe should be added to this profile.*

*Firstly, I recommend water temperatures of about 72-74 degrees at most for anacharis, preferably lower. The reason for this is that anacharis is a coldwater plant, and in both my*

*experience and that of others, its leaves are small, pale, and curled and the plant growth itself is straggly when placed in tropical tanks. This plant truly shines in well aerated coldwater tanks with a decent current, where it grows the large, lush leaves that can be seen in the picture provided.*

*Also correct me if I'm wrong, but it doesn't really seem that the plant's roots themselves work to facilitate the intake of nutrients, but serve as simply a role in anchorage, as the plant itself absorbs nutrients from the water column.*

*Third, it is recommended to cut this plant just above any new branches or buds, as the cut region will blacken, die, and cease to grow, so it is always optimal to have an actively growing tip at all times on any strand of the plant. Sometimes a bud will emerge from the side of a cut section, but having the tip seems to allow the plant to grow faster in general. Cutting should be at least 4 inches long, the longer, the better.*

*Fourth, being a bunch plant, in my experience its leaves will drop off in low lighting, and it requires medium to preferably high light to suit its rapidly-growing tendencies.*

*There have been reports that anacharis melts when exposed to higher dosages of seachem Excel.*

CREDITS

<http://fishprofiles.com/profiles/pla...acharis/75002/>

## POGOSTEMON STELLATUS, AUSTRIAN HYGRO

Author: Catsma



**Common Name:** Pogostemon stellatus, Austrian Hygro

**Latin Name:** Pogostemon stellatus, previously Eusteralis stellata

**Family Name:** Lamiaceae

**Plant Form:** Stem

**Sold as:** Bunch plant

**Placement:** Background

**Max Size:** 24 inches

**Plant Location:** Great backdrop/background plant

**Flowers:** None known

**Propagation:** Cuttings

**Growth Rate:** Moderate to Fast

**True Aquatic:** Yes

**pH:** Under 7.0

**Supplements:** Very high demand on iron. Requires high levels of CO2

**Lighting:** Very high

**Care Level:** Difficult

**Good for Beginners:** No

Probably the most demanding plant I've tried to grow. Miss a single dose of ferts or run out of CO2 and the plant immediately dies!! If you have the correct set up for this high maintenance plant, it makes an excellent addition to a planted tank. The more iron, more CO2 and the more

light the better.

Plant requires an acidic environment and does not do well when pH is over 7.0 degrees. Also, this picky plant requires soft water, so low GH and low KH, to thrive.

Plant has a very thick, brittle stem with fine needle like leaves. Leaves can reach 2 inches in length. Plants are known to develop a pink, lavender or deep purple coloring near the water surface when firmly rooted.

Often confused with *Limnophila aromatic*



## ANUBIAS COFFEEFOLIA

Author: Catsma



**Common Name:** Coffeefolia, anubias coffeefolia

**Latin Name:** Anubias barteri var. Coffeefolia

**Family Name:** Araceae

**Plant Form:** Rhizome

**Sold as:** Bare root, potted or rooted on driftwood

**Placement:** Midground or Foreground

**Max Size:** 16 inches

**Plant Location:** Tied to driftwood, porous rock or terra cotta

**Flowers:** White calla lily shaped

**Propagation:** Rhizome clippings or leaf cuttings

**Growth Rate:** Extremely Slow

**True Aquatic:** Yes

**pH:** Any

**Supplements:** Iron, Trace Elements

**Lighting:** Any

**Care Level:** Easy

**Good for Beginners:** Yes

A unique anubias known as a decorative plant form as the leaves are heavily ridged. This plant gets its name from the fact that the new leaves begin as a light coffee brown; and turn dark green with age and resemble a coffee bean. And will develop an extensive root system over time. When I purchased this plant the roots were more than a foot long!

In a high tech tank, this plant will produce a new leaf every 10-14 days like clockwork. When the iron levels drop, then there is no new growth. On the other hand, in low light consider yourself lucky to get a single new leaf once every month or two.

As with any slow growing plant, they are prone to algae. Although I have yet to see any algae on this plant. Anubias nana is a different story.

Anubias plants are very tough and can withstand the abuse from cichlids and goldfish. Is rarely eaten by the most destructive herbivores.

## ANUBIAS AFEZLII

Author: fishy\_friend2



**Common Name:**

**Latin Name:** Anubias afzelii

**Family :** Araceae

**Plant Form:** rosette

**Sold as:** sold in little pots, and sometimes even bare rooted

**Placement:** mid-background

**Plant Location:** slightly dug into substrate in the middle of the tank along with more of this plant or similar looking plants along side of it

**Growth Rate:** slow to moderate, because of this growth rate it should be placed in a part of the tank with slight movement as it can be prone to algae

**True Aquatic:** yes

**pH:** 6.0-8.2

**Supplements:** it appreciates a good fertilizer and large amounts of CO<sub>2</sub>

**Lighting:** low-high

**Care Level:** somewhat easy

**Good for Beginners:** yes

Anubias afzelii is a very tolerant plant with very few requirements, it can even be grown in very low light with no supplements at all, but this plant grows very slow so don't expect it to spread like a wildfire as some plants do in high light. Due to the slow growth of this plant it has been

known to obtain different kinds of algae, so I would recommend that you don't place this in direct high light or that you place it in a place in the tank with a slight current.

This species of Anubias has a very attractive look with a beautiful shade of green, long slender, graceful leaves, and broad leaves that some fish will love to stop and take a rest on. This plant really likes sand substrate, or small pebbles as with gravel it has very limited root movement in gravel. Due to the fact that this plant isn't very easily obtained it has been overlooked by many hobbyists, I would recommend, that if you can. That you should see and check if you can order this plant online as you won't regret it. This plant is very attractive, and will help with water conditions, it is also one of the best plants I've ever owned

## BACOPA CAROLINIANA

Author: fishy\_friend2



common name-lemon bacopa, bacopa

proper name -bacopa caroliniana

origin- North America

category - stem

care level - easy

growth rate-relatively slow in low light but faster in high light

lighting needs - moderate - high

temperature - 55-85

position in aquascape - mid-background

pH - 5.0 to 7.5

propagation - stem cuttings

needs added Co2 - no but will benefit from it

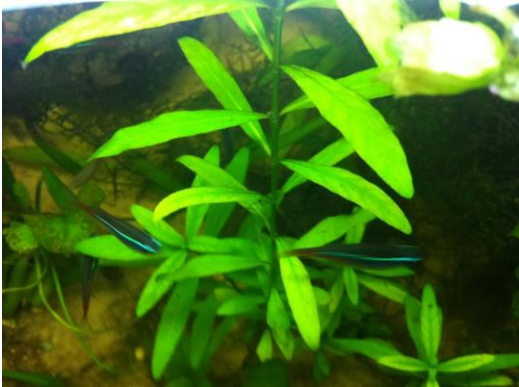
needs added fertilizers - no but will benefit from it, and if you do add them make sure you add the liquid ones as this plant isn't primarily a root feeder meaning it doesn't get lots of nutrients from the soil

This is an easily found, beautiful, hardy, popular aquarium plant that I personally love myself, because of its few requirements and the fact that when placed in the mid ground it adds what looks like layers or dimension to the tank itself. The green colors will compliment lighter colored fish in large schools. I have green this plant from high to low logo and it's been known to do

much better in high light so if I were you the. Would only get this plant if you can provide somewhat higher lights. It has been known to turn a light red color in the right conditions. I would recommend this for any setup if you can provide the right things for it. If you can this plant appreciates light liquid fertilization as it feeds through its root feeders out of the sides.

## HYGROPHILA POLYSPERMA

Author: fishy\_friend2



common name- dwarf hygrophila, hygrophila polysperma

proper name - hygrophila polysperma

origin - Asia

category - stem

care level - extremely easy

lighting needs - moderate-high, it will turn a beautiful reddish color almost like a sunset in higher lighting

temperature - -85

position in aquascape - mid to background as this can get fairly tall, it grew from a couple of inches to 1 foot within a few months for me

pH - it is adaptable to most conditions so really doesn't have a specific range that this plant should be in

hardness - is adaptable to most conditions so really doesn't have a specific range

propagation - small cuttings from the stem itself will grow very fast in the right conditions, but it may lose the base leaves when adapting after being cut

needs added Co2 - No, but this plant will thrive with it as will lots of other plants

needs added fertilizers - no, but this plant will certainly benefit from it as will lots of other plants, and if you do decide to add fertilizers, use liquid ones as with root tabs they will become useless because this plant is a heavy root runner feeder

This species of hygro is probably one of the best "beginners" plants, as it can be grown in the

most unfavorable conditions like low light, an imbalance in nutrients, minimal amounts of Co2 and extra nutrients, and low or high ph. It is a most favorable aquarium plant that i don't see often here in Texas..... other than in the lakes, streams and rivers. But it is easily obtained in other places so you'll most likely have lots of luck finding some. This plant is very attractive and has been known to turn an almost sunset red in the right conditions. Dwarf hygros are not the best plant for fry hiding unless you plan on putting it in a bush but still looks good either way. it will help with algae problems, and excess nutrient problems also as it will take away and suck up all the excess nutrients that are provided in the aquarium, meaning that there is nothing left for the algae to survive on. So for that reason I would recommend it for aquariums that always have algae problems as a result of lots of sunlight entering through the tank.



## HORNWORT CARE SHEET

Author: James95



**Common name:** hornwort

**Scientific name:** ceratophyllum demersum (The Complete Idiot's guide to Freshwater Aquariums by Mike Wickham, Alpha books 1998)

**Origin:** native to North America

**Planting zone:** floating plant, doesn't grow roots.

**Fertilizers:** not necessary

**Growth rate:** very fast

**Size:** several feet long

**Propagation:** trimmings

**Lighting:** low to moderate

**Sold as:** bunch plant

Hornwort is a very popular plant in the aquarium trade. It has very fine, soft needle-like leaves bound close together in a circular pattern. Hornwort is very inexpensive, grows quickly, and is rather undemanding. It's an extremely versatile aquarium plant. Many people use it as a spawning mop for killifish and as a hiding place for livebearer fry.

Although it's a great beginner's plant, hornwort does have a couple of downfalls. When introduced to a tank containing aquarium salt, hornwort will shed all its needles and make a huge mess in your aquarium.

Overall hornwort is a great, fast growing, versatile, and undemanding aquarium plant that's perfectly suited to the beginner aquarist.

## RICCIA MOSS, LIVERWORT, CRYSTALWORT

Author: Catsma



**Common Name:** riccia moss, liverwort, crystalwort

**Latin Name:** Riccia fluitans

**Family Name:** Ricciaceae

**Plant Form:** Moss

**Sold as:** Mat

**Placement:** Foreground or float

**Max Size:** Can grow into fairly large sized mats

**Plant Location:** In substrate or floating

**Propagation:** Cuttings or division of mat

**Growth Rate:** Moderate

**True Aquatic:** Yes

**pH:** Any

**Supplements:** CO2

**Lighting:** High to Very High

**Care Level:** Moderate

**Good for Beginners:** No

Popularized by Takashi Amano. Becoming a sought after moss. As far as mosses go, it is one of

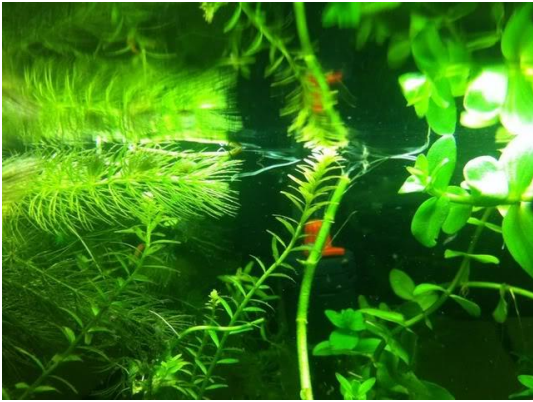
the more demanding varieties. If left to float, will sink on its own when the mat becomes heavy. Can be tied to wood or rock. All in all a versatile plant so long as it's high demand on lighting and CO2 are met.

Not compatible with duckweed. Usually algae free, but can be lost to hair algae.

Great in fry tanks as the moss can provide hiding places for fry.

## ROOTALA ROTUNDIFOLIA

Author: fishy\_friend2



Common name - rotala rotundifolia

Proper name - Rotala rotundifolia

Lighting needs - Moderate to high, but has been known to grow well in lower lights as long as it has proper Co2 and fertilizer additions

Temperature range - 65 - 85

Category - stem plants

Growth rate - fast in higher lighting

Hardness - 2-15

pH - 5.0 to 8.0

Difficulty - somewhat easy, but beware when first adding it to your aquarium as it has been known to shed lots of leaves during the first week

Origin - Asia

Position - mid ground to background, sometimes if it is even trimmed correctly it will look magnificent in the fore ground

Can be grown out of water - In My Experience it can be grown out of water so. Yes.

Needs added fertilizers - No but will benefit from it

Needs added Co2 - No but will most certainly benefit from it

This beautiful Aquarium plant is the best choice for almost any aquarium for lots of reasons but mostly because of its beautiful long, slender leaves that can even turn the loveliest shade of red. It is also very hardy for such a little delicate stemmed plant, it has grown in so many bad conditions for me. I've had it grow successfully in a 1 gallon, unheated tank. They help so much for quality, but don't depend on these for ammonia removers as they won't do the full job.

From having this plant in my tank for so long i have found that it adds a layered look to the tank, it looks spectacular in the back ground or mid ground for these specific reasons. If you can provide these every few requirements then you should definitely get this nice little plant here  
Notes-

 Originally Posted by **Ladayen** 

*R. Indica and R. Rotundifolia have both been classified for a long time, however the real R. Indica has only been available to the hobby for a couple years. Previously R. Rotundifolia was often sold as R. Indica, when they are 2 distinct species.*

*I'll provide this link for comparing the two species.*

<http://www.plantedtank.net/forums/pl...vs-indica.html>

Credits

Mostly experience but have also used the following websites for specific questions

<http://www.plantedtank.net/forums/my...undifolia.html>

<http://www.tropica.com/plants/plantd...n.aspx?pid=033>

<http://www.fishandtips.com/displaydb.php?ID=59>

## BROAD LEAF, ROUND LEAF, ANUBIAS BARTERI

Author: Catsma



**Common Name:** Broad Leaf, Round Leaf, Anubias barteri

**Latin Name:** Anubias barteri nana

**Family Name:** Araceae

**Plant Form:** Rhisome

**Sold as:** Potted or bare root

**Placement:** Foreground or midground plant

**Max Size:** 16 inches/

**Plant Location:** Tied to rock or driftwood; planted in substrate with the rhisome fully exposed

**Flowers:** White, calla lily shaped

**Propagation:** Rhisome cuttings

**Growth Rate:** Very slow

**True Aquatic:** Yes

**pH:** Any

**Supplements:** Undemanding

**Lighting:** Any

**Care Level:** Easy

**Good for Beginners:** Yes

Undemanding plant that is great for beginners. A very slow growing plant. Under high light this plant can pearl and will bloom with constant fertilization dosing; and can produce a new leaf every 10 to 14 days. Under lower light, plant may only produce a new leaf each month.

Due to their slow growth, plants are very prone to algae. My plants have the most trouble with Green Spot Algae and Black Beard Algae.

Fish tend to leave this plant alone. Can be grown with goldfish or cichlids. The more voracious plant eaters, such as Silver Dollars, are known to eat the plants.



## PYGMY CHAIN SWORD CARE SHEET

Author: James95



**Common name:** Pgymy chain sword

**Scientific name:** *echinodorus tenellus*

**Size:** up two 6" tall in high light, 4" in medium light

**Growth rate:** moderate

**Lighting:** medium to high

**Propagation:** sends out runners

**Placement:** foreground plant

**Fertilizers:** beneficial but not necessary

**Care level:** great beginner's plant

Pygmy chain sword is the perfect foreground plant for any planted aquarium. It stays low to the substrate and sends out runners, sprouting new plants. Once established pygmy chain sword will carpet the bottom of your tank. It does best in high lighting and appreciates root tab fertilizers.

Pygmy chain sword grows best in fine aquarium gravel or sand, approximately the size of a BB. Because of the high light requirements, this plant is prone to algae growing on its leaves. Otocinclus catfish work great for cleaning the algae off your pygmy chain sword plants. Overall,

pygmy chain sword is a great addition to any planted aquarium.

## JAVA MOSS CARE SHEET

Author: fishy\_friend2



proper name - formerly thought to be *Vesicularia dubyana* but now it possibly is *Taxiphyllum barbieri*

origin - South east Asia

care level - it is an easy beginner plant

lighting - it does well in low to high lighting setups

substrate preference - this plant is floating so it doesn't have any type of difference in growth with different substrates

temperature range - grows best at 75-80 but can survive in temperatures of 60-85

category - floating



growth rate - fast

position - can be placed anywhere in the tank, it can be a wall, carpet, etc.

max size - it depends on how you plant it

pH - it is adaptable to most PH ranges, so should theoretically be fine in most setups

notes - this is a very beautiful, hardy, fast growing, and very rewarding aquarium plant that will be the best addition to almost any home aquarium setup. Due to its low care requirements it will grow green in the worst of conditions. this plant has many advantages including it being one of this plants that will help with ammonia issues, there have been studies with java moss, and it took 2 weeks for a small female betta to produce .25 PPM ammonia in a 1 liter tank. From my own experience my fish love to swim through the tangled up moss, this plant has helped my fry survive to adulthood as they retreated in it as soon as the bigger fish came by.

 Originally Posted by **Butterfly** 

*I have found when Java Moss is left to float in the tank it tends to tangle in the filter or attach to everything in the tank. It is easier to control when attached to wood, rocks or other objects. Just my thoughts.*

## GIANT ANUBIAS

Author: Dino



Common Name: giant anubias

Latin Name: *Anubias hastifolia*

Plant Form: Rhizome

Sold as: Single plant

Tank Placement: Back-ground in very large tanks

Max Size: 4 feet

Temperature: 60-86 degrees

pH: 5.0-8.5

Growth Rate: Very slow

Propagation: Cuttings off mother plant

Lighting: Any

Supplements: Liquid fertilizers

Difficulty: Easy

Good for Beginner: Only if they have very large tanks

Note: leaves can grow as large as 3 feet long

## WATER WISTERIA

Author: DLondon95



**Common Name:** Water Wisteria

**Latin Name:** Hygrophila Difformis

**Plant Form:** Stem Plant

**Sold as:** Bunched

**Tank Placement:** Mid-ground or Background

**Max Size:** 2+ Feet

**Temperature:** 74-84 degrees

**pH:** 6.5-8.5

**Growth Rate:** Very Fast

**Propagation:** Cuttings

**Planting Location:** Planted in substrate or left floating

**Lighting:** Any

**Supplements:** None needed, but appreciates Co2 and liquid fertilizers

**Difficulty:** Very Easy

**Good for Beginner:** Yes

Water Wisteria is a fast growing stem plant that has bright green, uniquely shaped leaves. It is a great plant for soaking up extra nutrients in a tank and looks great in any tank. It grows very fast

and can be propagated by simply cutting the stem about 4 or 5 inches down from the top and planting it in the soil or floating.



## JAVA FERN

Author: DLondon95

**Common Name:** java fern

**Latin Name:** Microsorium Pteropus

**Plant Form:** Rhizome

**Sold as:** Single plant

**Tank Placement:** Mid-ground

**Max Size:** 18 in

**Temperature:** 60-86 degrees

**pH:** 5.0-8.5

**Growth Rate:** Slow

**Propagation:** New plants will form on the leaves of bigger plants and fall [B]to the substrate or splitting the rhizome

**Planting Location:** Tied to rocks or driftwood. Can also be planted in [B]the substrate, but be sure not to bury the rhizome

**Lighting:** Any

**Supplements:** None needed, but will appreciate Co2 and liquid fertilizers

**Difficulty:** Easy

**Good for Beginner:** Yes

Java fern is a very easy, bright plant. It is very hardy and slow growing. It can be tied to practically anything in the tank, but does best on driftwood. If planting in the substrate, be sure not to bury the rhizome.

## LUDWIGIA REPENS - RED LUDWIGIA OR BROAD LEAF LUDWIGIA

Author: fishy\_friend2



Common Name - Red Ludwigia or Broad Leaf Ludwigia

Proper Name - Ludwigia Repens

Temperature Range - 60 to 84 Fahrenheit

Optimum Growth Temperature - 74 to 80 Fahrenheit

Placement in tank - Mid Ground to Back Round

Lighting - Medium to high lighting or 2 wattage per gallon to 4 wattage per gallon, but can grow red under 2 wattage per gallon with a good amount of fertilizers, Co2 and flow

Maximum size - 20 inches or 1 foot 8 inches

Growth rate - Fast (in the right conditions)

Difficulty - Easy

Origin - North America

Category - Stem Plant

pH - 5 to 8

Can be grown out of water - Yes

Needs added fertilizers ~ no, but will benefit from them

Needs added Co2 ~ no, but will benefit from it

Ludwigia repens can be grown in most aquariums with these few requirements, as long as you can provide the things listed above your plant should grow beautifully. This plant usually grows to about 20 inches at MAX, that is why it is usually advised for mid to background and the width of each stem is 2 to 3 inches, depending in the leaf growth. Ludwigia Repens colors vary depending on the lighting, they are a light green when in 2 WPG light color red on 3 WPG and a very rich color of red in 4 WPG and brighter, but this plant can grow red under as little as 2 WPG with a good amount of ferts, Co2 and a little flow. This Ludwigia originates from North America. It can tolerate a range of temperatures that vary from 60 to 80 but for the most growth you should place it in a tank with temperatures ranging from 74 to 80. In my own experience this ludwigia is a very beautiful plant with very few requirements to grow well, and almost always will grow very fast, i also have noticed that these plants usually experience melt when introduced to a new aquarium. But it is not very bad only a few leaves. Not all of them the melt is not as bad with this plant

## CARDAMINE LYRATA

Author: fishy\_friend2



Cardamine Lyrata

Common name - Chinese ivy,japanese cress, or penny wort

Proper name - Cardamine Lyrata

Lighting needs - medium to high

Temperature range - 60 to 82 degrees Fahrenheit

Category - stem plants

Growth rate - fast

Hardness - 4 to 12 NK

pH - 5.5 to 7.5

Difficulty - Easy

Origin - Asia

Position - mid ground to fore ground

Max size - 30 cm, sometimes 40 cm or 11 inches, sometimes 15 inches

Can be grown out of water - Yes

Needs added fertilizers - No but will Benefit from it

Needs added Co2 - No but will Benefit from it

penny wort is a very fun to keep, beautiful, hardy, aquarium plant that can readily be found at most big chain stores or LFS's. this plant loves high light and thrives in it. My fish love to swim

through and rest on these broad, bright green leaves that this plant provides. honestly though, it's not the best choices for low light setups as it will shed its leaves, and look like an empty stalk sticking out of the gravel, but don't be alarmed if it loses a couple of leaves when you first get it as this plant always does that when acclimating to a new aquarium

## OZELOT SWORD, SPOTTED SWORD

Author: Catsma



**Common Name:** ozelot sword, spotted sword

**Latin Name:** Echinodorus ozelot

**Family Name:** Alismataceae

**Plant Form:** Rosette plant

**Sold as:** Bare root or potted

**Placement:** Mid-ground or Background

**Max Size:** Most resources indicate up to 18 inches/45 cm; however, plants grow into tank busters over time, reaching above 24 inches/60 cm

**Plant Location:** In deep substrate

**Flowers:** Inconsequential; so small that flowers are rarely noticed

**Propagation:** Divisions, pollinated flowers or side shoots

**Growth Rate:** Moderate to fast

**True Aquatic:** Yes

**pH:** 7.5 or lower

**Supplements:** High quality fertilizer and Root Tabs

**Lighting:** Moderate to High

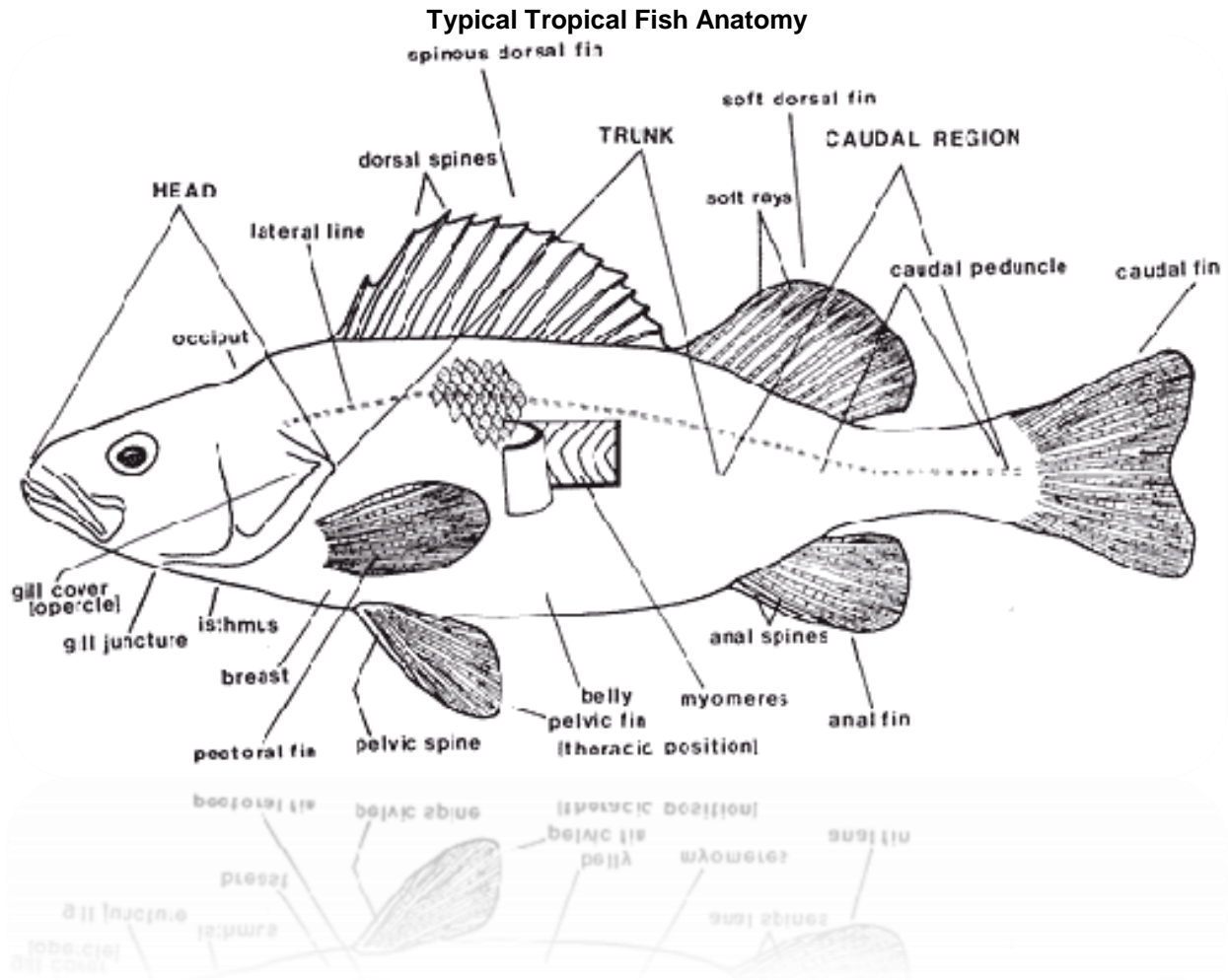
**Care Level:** Easy

**Good for Beginners:** Yes

Larger sword plant that is manmade. A hybrid of *Echinodorus schlueteri* 'Leopard' and *Echinodorus barthii*. The plant has a unique rusty spotted or marbled pattern on its green leaves. These spots are lost in lower lighting. Under high lighting, plant can produce a new leaf per week.

## TROPICAL FISH ANATOMY

Below you will find the typical anatomy of a tropical. Knowing the names of the various body parts or fish anatomy can be very beneficial when troubleshooting issues or disease such as fin rot, pop-eye or ich.





## ARCHERFISH

### ARCHERFISH - TOXOTES JACULATOR

Authors: Tom and Sabi

The Archerfish is famed for its amazing ability to shoot down resting insects above the water surface. However jumping out of the water to catch its prey is much more preferred than 'shooting', as the one that caught the insect doesn't always get to it first. When the insect is near in enough, the archerfish will leap out of the water to catch it in its mouth. If this fails, then it will resort to shooting. Generally the fish swim in 'shooting parties'. When prey is sighted they will shoot relentlessly. Each archerfish will shoot at the same insect, when it falls the entire archerfish 'party' rushes towards it, wanting to be the first to grab it.



Photo Credit: R.Wampers

Archerfish are able to shoot by putting their tongue against the roof of the mouth, forming a tube. By suddenly shutting their gills, water is then powerfully forced along the tube and out. The tip of the tongue directs the aim. Their large eyes are located near the mouth giving off a binocular vision thus assisting their aim to accuracy. To get a good jet of water, the snout is pointed out of the water with the rest of the body remaining under. Their eyes, however, do not automatically correct for refraction, and they have to learn how to do this. The position of least distortion is directly below the prey, and the fish soon learn that this is the best shooting spot. They can shoot up to 7 times in succession, 2 - 3 meters being the longest range. However they are accurate only around 1 - 1.5 meters. Sometimes the blast of water may not bring the insect down but the weight of the water on its wings brings it down. Young fish start learning to shoot when they are about 1 inch long, their jets reaching 10 - 20 cm.

The body of the archerfish is moderately elongated and laterally compressed with a pointed face thus presenting a narrow profile when viewed from above. The dorsal and anal fins are situated far back on the body and the tail has a slightly rounded edging. The back is yellow/greenish or brown in color, while the flanks are a pale gray going on to silver. It has four to six black bars vertically across its body, the first running across the eye and the last just before the tail. The last bar extends to the rear end of the dorsal fin as well as to the anal fin. These bars also result in it being called Banded Archerfish. The Archerfish's eyes are large, with reason, and the mouth faces slightly upward.

Their original habitat includes, Southeast Asia, northeastern Australia and the Gulf of Aden, mainly the brackish waters. A pH of 7.0 to 8.0, medium hard water and a temperature of 68 - 82 °F (20 - 28 °C) is the best conditions for them to be kept in. When they reach 4 to 5 inches in size 1 teaspoon of aquarium salt per 1 gallon of water should be added to the aquarium water. Growing between 10 and 12 inches in size, these fish require a tank size of a 100 gallons, minimum. Providing plants that grow above the water surface is advisable but be sure not to crowd the surface area as they need space to practice their shooting. Rocks too can be added. Keeping the water level a few inches below the top is also advised, so that they have room to practice. The tank lid must be secure as they jump.

Being omnivores, archerfish can be fed live insects, meal worms, and freeze dried plankton. These can be fed with dry seaweed. Smaller fish can be given to them too as they grow, as they hunt other aquatic creatures too in their natural habitat. Most insects are eaten with relish, for example, spiders, crickets, mosquitoes, grasshoppers and earthworms.

It is preferable that archerfish are kept in groups, however, being alone can be fine too. They are generally peaceful fish but smaller fish should not be kept as tank mates as they will most probably get eaten as the archerfish grows.

There is no way known of sexing them. Reports of archerfish breeding in captivity are rare. If it is your wish to breed them you should get a group of archerfish together in a aquarium. The adult archerfish pair spawns at the surface, laying up to 3000 eggs. These eggs float on the water surface. To ensure the survival of the fry, the eggs should be transferred to another tank. They will hatch in around 12 hours.

### Archerfish Profile and Catfish Care Information

**Scientific Name:** *Toxotes jaculator*

**Common Name:** Archerfish, Banded Archerfish

**Care Level:** easy to medium

**Size:** between 10 and 12 inches (25 - 31 cm)

**pH:** 7.0 - 8.0

**Temperature:** 68 - 82 °F (20 - 28 °C)

**Origin / Habitat:** Asia, Oceania, India and eastward to Philippines - found in brackish water conditions in estuaries and but also travels into rivers. Situates near overhanging vegetation for food sources.

**Archerfish Lifespan:** Possibly longer lived in aquariums - 5 to 10 years or longer

**Temperament / Behavior:** Can become territorial with their own species, but are usually peaceful with most other tank mates.

**Compatible Tank Mates:** Other brackish fish species such as Monos, Scats, some Gobies, etc.

**Breeding / Mating / Reproduction:** See breeding section in the article above.

**Diet:** Omnivorous, will accept a wide range of foods, but frozen/live are foods preferred. Crickets and worms are good treats too.

**Archerfish Tank Size:** A minimum of 100 gallons (~379 liters)

**Gender:** See article above.

**References / More Info / Recommended Reading:**

- The practical encyclopedia of freshwater Tropical Aquarium Fishes by Dick Mills, Gwynne Vevers, Douglas G Campbell
- 500 Freshwater Aquarium Fish by Greg Jennings

## AROWANA

### SILVER AROWANA - OSTEOGLOSSUM BICIRRHOSUM

The Silver Arowana comes from the Amazon River in South America. The silver arowana is a very beautiful and a fascinating fish to watch. However, because of their huge adult size of 35 - 40 inches (89 - 102 cm) they are not recommended for the beginning aquarist. Actually, this is one of those fish that are probably best kept in the wild or in huge public aquariums.

The Silver Arowana requires at least a 200 gallon (750 liters) tank to adequately keep them. You also need an excellent aquarium filter such as an external canister filter. Arowanas are also excellent jumpers so you will need a good, tight fitting hood with no escape holes. In the wild, the Silver Arowana can jump out of the water at insects and small animals on overhanging branches.

Because of their potential adult size, there are not many compatible tank mates that quickly come to mind but you may be able to keep an Arowana with a larger Common Pleco.

This fish is definitely one fish species that is best left to the experts and public aquariums.

#### Silver Arowana Picture



Photo Credit: Lenny Bianco

#### Silver Arowana Profile Facts and Care Information

**Scientific Name :** Osteoglossum bicirrhosum

**Common Names :** *Silver Arowana, Dragon Fish, Arawana, Aruana, Arrowana, etc.*

**Arowana Care Level :** Moderate to Difficult, needs a large tank and is not recommended for the beginning aquarist. Needs a good aquarium filter like an external canister filter.

**Size :** 35 - 40 inches (89 - 102 cm)

**pH** : 6.0 - 7.5

**Temperature** : 75°F - 83°F (24°C - 28°C)

**Lifespan** : 10 - 20 years or longer.

**Origin / Habitat** : South America, Amazon River

**Silver Arowana Temperament / Behavior** : Can be aggressive, especially with smaller aquarium species.

**Silver Arowana Breeding / Mating / Reproduction** : They have been bred in captivity. The males carry the eggs in their mouths (mouth brooder).

**Tank Size** : 200 gallon minimum but preferably much larger tanks. This fish is best left in the wild, in public aquarium displays or with advanced hobbyists with the equipment and space to keep them.

**Silver Arowana Compatible Tank Mates** : Because of the huge adult size of Arowana there are very few common aquarium species recommended. One that may potentially be kept with them is the Common Pleco, but you would need an even bigger tank (bigger than 200 gallons) to provide both of them with adequate water volume as adults.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : A carnivore - provide a varied diet with pellet food, frozen food and they will definitely accept live food.

**Tank Region** : Mostly at the top of tank

**Silver Arowana Gender** : May only be possible to determine gender differences in mature adults Arowanas. Males may have larger mouths since they are mouth breeders.

**Fish Lore Forum** : Arowana Forum

**Author** : Mike FishLore

### BALA SHARK, SILVER SHARK - BALANTIOCHEILOS MELANOPTERUS

The Bala Shark is also known as the Silver Shark and is a growing favorite among tropical fish hobbyists. The Bala Shark isn't a shark at all though. It belongs in the Cyprinidae family. They are commonly named silver sharks because of their appearance and the shape of their dorsal fin. These "sharks" require large tanks because of their potential adult size of 13 inches and because this fish does better when kept in groups. The Bala Shark is mostly peaceful but may eat smaller fish such as neon tetras when they reach a large enough size.

Also, be warned that these Bala sharks are excellent jumpers. Have a hood on your aquarium to prevent your Silver Shark from leaping to its death. They are very fast swimmers and will dart around your aquarium very quickly. Be sure you don't have any sharp objects in your aquarium that could injure your fish.

They are not recommended for the beginner because of their large aquarium requirements.

These freshwater Bala sharks (not really sharks) will eat most types of fish food including vitamin enriched flake foods, pellets, frozen, freeze dried and definitely live foods with the key being a varied diet. They sometimes make a clicking noise while eating.

#### Bala Shark Pictures



#### Bala Shark, Silver Shark Profile Facts and Care Information

**Scientific Name :** Balantiocheilos melanopterus

**Common Names :** *Bala Shark, Silver Shark, Tri Color Shark Minnow, H Angus, Silver Bala*

**Care Level :** Easy to Medium, needs lots of swimming space and a larger tank.

**Size :** Up to 13 inches (33 cm)

**pH :** 6 - 8

**Temperature :** 72°F - 82°F (22°C - 28°C)

**Water Hardness :** 5° to 12° dH,

**Lifespan :** 8 - 10 years

**Origin / Habitat :** South East Asia

**Bala Shark Temperament / Behavior :** Peaceful and can be kept with smaller fish. However, don't keep with tropical fish small enough to fit in the Bala's mouth such as neon tetras.

**Bala Shark Breeding / Mating / Reproduction :** Breeding is not recommended in the home aquarium due to their large adult size.

**Tank Size :** They will do much better in larger aquariums. Considering these are shoaling fish and considering their adult size, a 125 or even 180 gallon tank would be more appropriate for an adult school.

**Bala Shark Compatible Tank Mates :** Many, given the peaceful nature of this fish but avoid keeping them with fish small enough for them to eat.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Bala Shark Diet / Fish Food :** Good eaters, they will go after flakes, pellets, freeze dried and live foods. Give them a varied diet.

**Tank Region :** All

**Gender :** Hard to determine, but the female may be smaller than a male Silver Shark of the same age.

**Author :** Mike FishLore

**Fish Lore Forum :** Bala Shark Forum

## CHERRY BARB - PUNTIUS TITTEYA

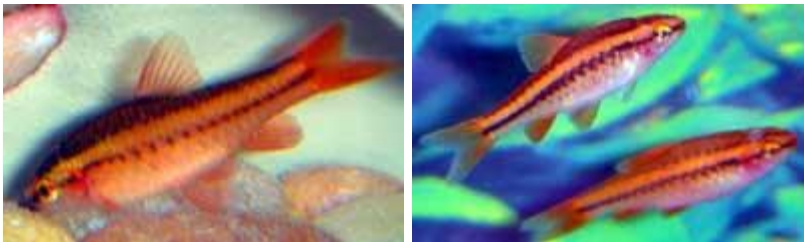
The Cherry Barb is a great tropical fish for the beginner because they can tolerate a wide range of water parameters. The Cherry Barb is also a very peaceful and very good community fish that will bring lots of activity to your aquarium. They stay on the small side, usually 1.5 to 2 inches (5 cm) and should leave most of their tank mates alone. The Cherry Barb does best when kept in a school, preferably 6 or more them.

It is interesting to note that the Cherry Barb is almost extinct in the wild but are still doing very well within the tropical fish hobby. This really is a pretty little fish and the photos in this profile doesn't do them justice.

The Cherry Barb may be somewhat picky about their food when first acclimated to your tank (should be expected) but that should soon wear off and they'll be going after most of the commonly fed fish foods.

Put in some live plants and or artificial caves to provide hiding places to help make these barbs feel secure. This fish should reward you with lots of activity and will bring a splash of color to your fish tank.

### Cherry Barb Picture



### Cherry Barb Profile Facts and Care Information

**Scientific Name :** Puntius titteya

**Common Names :** *Crimson Carplet*

**Cherry Barb Care Level :** Easy, very good fish for freshwater beginners

**Size :** Up to 2 inches (5 cm)

**pH :** 6 - 8



**Temperature** : 72°F - 82°F (22°C - 28°C)

**Water Hardness** : 5° to 25° dH,

**Cherry Barb Lifespan** : 5 - 7 years

**Origin / Habitat** : Sri Lanka

**Cherry Barb Temperament / Behavior** : Peaceful and best kept in schools of 6 or more. They can be very shy. Try to keep them in a school to make them feel most comfortable.

**Cherry Barb Breeding / Mating / Reproduction** : Moderate. They will need an aquarium with plants because they hang their eggs from plants with thread like material. You will have to remove the adults because they most likely will eat the eggs.

**Tank Size** : 5 gallon or larger.

**Cherry Barb Compatible Tank Mates** : Many, given their peaceful nature.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Omnivore, they will take flakes, live and freeze dried foods such as [brine shrimp](#), blood worms and daphnia.

**Tank Region** : All over the tank

**Gender** : The male is usually bigger and turns bright red when it is ready to spawn.

**Author** : [Mike FishLore](#)

**Fish Lore Forum** : [Cherry Barb Forum](#)

The Glofish is a genetically modified zebra danio that comes in several different fluorescent neon colors such as red, green, orange, blue and purple. The Glofish was genetically modified with the purpose to detect environmental pollution. Scientists were able to inject a fluorescent protein gene (from marine organisms) into the zebra danio embryos to create the glofish. There are no dyes or color injections into this fish. Successive offspring get the gene passed down to them from parents. They are still working on developing a fish to only fluoresce when in the presence of pollution and a portion of glofish sales goes to the advancement of this research.

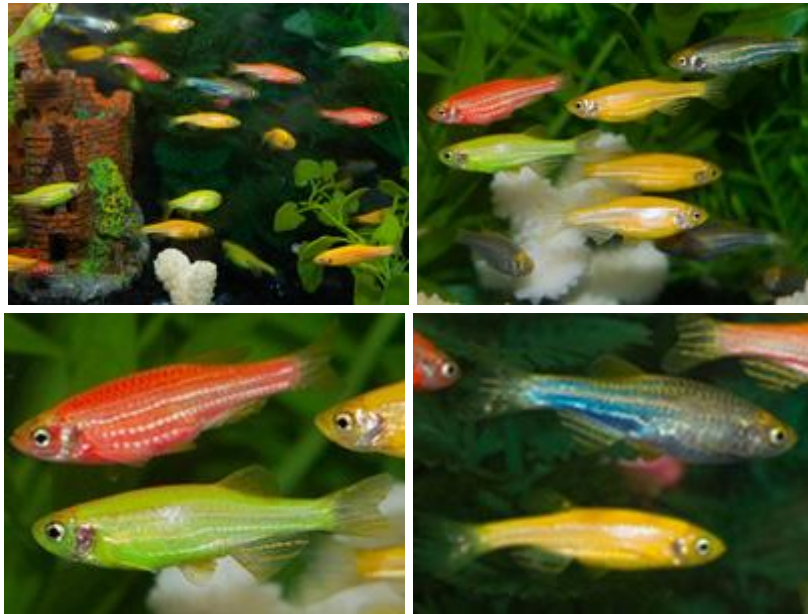
If you are looking to buy glofish for your tank they are kind of expensive for freshwater fish. A popular online live fish merchant has a price of \$20 for a 3 pack or \$35 for a 6 pack.

Being zebra danios, Glofish will need to be kept in a group of at least 6 or more for best results. There may be some in fighting among themselves but keeping them in groups should help limit their fin nipping tendencies. They also look very cool when kept in large schools. Keeping glofish under black lights and dark colored gravel is popular and they even have complete glofish aquarium kits available now.

Feed them a high quality flake food and supplement with thawed brine shrimp from time to time. Give them good clean water conditions, suitable tank mates, a high quality diet and they should have a normal life span of about 2 to 4 years, with an average life span of around 3.5 years.

It should be noted that glofish are not for sale in the state of California due to environmental regulations imposed by that state. You also are not allowed to breed glofish, unless it's for educational purposes.

### Glofish Photos



Images Copyright Glofish.com

### Glofish Profile Facts and Care Information

**Scientific Name :** Danio rerio

**Common Names :** *Glofish - Starfire Red<sup>®</sup>, Electric Green<sup>®</sup>, Sunburst Orange<sup>®</sup>, Cosmic Blue<sup>®</sup>, Galactic Purple<sup>®</sup>, Red Danio, Green Danio, Orange Danio, Blue Danio, Purple Danio*

**Care Level :** Easy

**Size :** Up to 2 inches (5 cm)

**pH :** 6.5 - 8

**Temperature :** 65°F - 75°F (18°C - 24°C)

**Water Hardness :** 5° to 19° dH,

**Lifespan :** 2 - 4 years, sometimes up to 5 years

**Origin / Habitat :** Genetically modified zebra danios, Glofish are aqua cultured

**Temperament / Behavior :** Mostly peaceful when kept in groups of 6 or more with occasional fighting and chasing among the group.

**Breeding / Mating / Reproduction** : Note: Glofish breeding is prohibited due to licensing restrictions (See number 4 here: [Breeding Restrictions](#)). Zebra Danios are considered easy to breed. A popular method is to use marbles for the bottom of the aquarium so that the eggs can escape predation from the adult glofish. Maintain a water temperature of 78°F while feeding them high quality foods and the female will drop its eggs in the marbles. Siphon up the eggs and the eggs will hatch in two to three days. Fry can initially be fed live paramecia or other microorganisms. At around day 9 they can be fed brine shrimp.

**Tank Size** : 10 gallon or larger for more stable water parameters and to get a bigger group together. They really look nice when kept in larger schools with dark colored gravel.

**Compatible Tank Mates** : Glofish can be kept with other danios, barbs, tetra, angelfish and other freshwater fish species not big enough to eat them.

**Fish Disease** : [Freshwater Fish Disease](#) - in general this is considered a very hardy fish but is noted to be susceptible to velvet disease, mycobacteriosis and intestinal capillariasis (ref: zfin.org)

**Glofish Diet / Fish Food** : in the wild zebra danios eat insect larvae, worms and small crustaceans. A good tropical fish flake food mixed in with some thawed brine shrimp or other fresh foods occasionally.

**Tank Region** : Middle to Top levels of the aquarium

**Gender** : Hard to distinguish male from female when juveniles but as adults, females should develop a more pronounced stomach when carrying eggs.

**Fish Lore Forum** : [Zebra Danio Forum](#)

**Author** : [Mike FishLore](#)

## References

[zfin.org](#)

[Glofish.com](#)

"Danio rerio". *FishBase*. Ed. Ranier Froese and Daniel Pauly. November 2005 version.  
[Zebrafish as Pollution Indicators](#)

## GOLD BARB - PUNTIUS SACHSII

The Gold Barb is another hardy freshwater fish that is good for beginners. The Gold Barb will tolerate a wide range of water parameters, stays relatively small (3 inches - 8cm), is quite colorful and should play nicely with most tank inhabitants. They have a mostly gold colored body with small dark or black patches running down the lateral line of the body.

These Gold Barbs may not do very well in planted aquariums because they may nip at the plants. If you have a heavily planted tank you may be able to keep a few of these, but if your tank is sparsely populated with plants they may rid you of your plants.

Behavior wise, the Gold Barb does best when kept in a school of 5 or more and they may bicker among the school about the pecking order. Avoid keeping them with long finned fishes such as Bettas, some of the long finned tetras and Angelfish because they may nip at their fins.

The Golden Barb is a good eater and if they aren't eating it may be safe to assume that something is wrong with the water parameters in your tank. A flake food can form the main part of their diet, but supplement with other foods.

### Gold Barb Picture



### Gold Barb Profile Facts and Care Information

**Scientific Name :** Puntius sachsii

**Other Common Names :** *Gold Barb, Goldfinned Barb, Golden Barb*

**Care Level :** Easy and can be good fish for freshwater beginners

**Size :** Up to 3 inches (8 cm)

**pH :** 6 - 8

**Temperature** : 72°F - 82°F (22°C - 28°C)

**Water Hardness** : 5° to 25° dH,

**Lifespan** : 5 - 7 years

**Origin / Habitat** : Asia, Singapore

**Gold Barb Temperament / Behavior** : Peaceful and best kept in schools of 6 or more.

**Breeding / Mating / Reproduction** : Moderate. It is believed that the reproductive cycle of the Gold Barb can be closely tied to the cycles of the moon. Hmm... Males may take on a slightly different color when in breeding mode. They will need an aquarium with plants because they spawn in the plants, such as java moss. You will have to remove the adults because they most likely will eat the eggs. Fry should hatch in a couple days and then you'll need to feed them liquid fry food and baby brine shrimp or other good fry foods.

**Tank Size** : 20 gallon or larger since they like to school.

**Compatible Tank Mates** : Many, given their generally peaceful nature of the Gold Barb. Would do well in community tanks and Barb themed aquarium setups. However, use caution if you have long finned fish such as Angelfish and Bettas. They may fin nip at these longer finned fish.

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment - Can sometimes be one of the first to show signs of ich. Use a quarantine tank for all new arrivals.

**Diet / Fish Food** : Omnivore, the Gold Barb will eat flakes, live and freeze dried foods such as brine shrimp, blood worms and daphnia.

**Tank Region** : Middle to bottom regions of the tank

**Gender** : The male is usually smaller, more stream lined and sometimes turns a more golden/orange color when it is ready to spawn.

**Author** : Mike FishLore

**Fish Lore Forum** : Gold Barb Forum

### [Goldfish Care Sheet](#)

### [Member's Goldfish Photos](#)

### [Goldfish Forum](#)

The Goldfish is a favorite fish for many. How many of us didn't keep them at one time or another? Goldfish are usually very hardy fish and they can live in temperatures ranging from 40°F - 90°F (4°C - 32°C). It is important to note that this fish has an extremely long lifespan if cared for properly, so getting one can become a long term commitment. Many varieties of this fish are available with many different markings, fancy varieties and colors including gold, orange, white and black.

They can sometimes come down with swim bladder disease and occasionally freshwater ich. It's very important to provide your fish with frequent water changes and quality, nutritious fish food.

To increase your chance of success with keeping them, try not to keep them in a tiny bowl. A tiny bowl will become polluted quickly and you'll have to perform maintenance all of the time. Instead get your goldfish at least a 20 gallon tank with a good power filter or canister filter. Also, if you want to keep multiples, try for a minimum of 10 gallons per goldfish after the initial 20 gallons for better long term success with this fish.

### **Goldfish Care Summary**

- Allow adequate volumes of water, preferably 20 gallons for one and 10 gallons (38 liters) per additional goldfish.
- Perform frequent partial water changes and gravel vacuuming while avoiding wide water quality fluctuations such as temperature, pH, etc.
- Avoid keeping them in small goldfish bowls. Most bowls are simply inadequate to properly care for a fish. They only hold a gallon or two, need frequent cleaning, it's hard to use a filter, and provide little to no swimming space for your fish. What a miserable existence this has to be. A better option would be to place them in a large species only goldfish aquarium.
- Give your fish a high quality and varied diet. Don't get the bulk size containers since fish food does lose nutritional value as it ages and as the top of the container is opened and closed every

day. Think really stale potato chips. It's better to buy your fish food in smaller containers in this case.

- Learn about the [aquarium nitrogen cycle](#) if you don't know about it already.
- Don't over clean the filter! Rinse out the filter media in discarded aquarium water and re-use or only replace half the filter media at a time to avoid losing most of the beneficial bacteria needed to keep the water safe for your fish.
- Remember that the Goldfish will grow in size and that they can live for quite a long time if cared for properly.

## Goldfish Picture



### Goldfish Profile Facts and Care Information

**Scientific Name :** Carassius auratus

**Common Names :** Calico Veiltail, Comet, Black Moor, Bubble eye, Lionhead, Ranchu, Oranda, Pearl Scale, Ryukin, Panda, Fantail, Shubunkin (calico), Tosakin, Orange Fantail, Black Fantail, Pompon, Celestial, Telescope, etc. There are many different varieties of this fish out there with more being developed.

**Care Level :** Common varieties are easy and good for the [freshwater aquarium fish beginner](#) who is willing to perform the frequent water changes required in smaller setups. Some of the fancy varieties can be slightly more difficult to care for and need more stable water conditions and high quality foods. See the summary above.

**Size :** Usually 3 to 5 inches (8 - 13 cm), but can get bigger

**pH :** 6 - 7.5



**Temperature** : 40°F - 80°F (5°C - 27°C)

**Water Hardness** : 5° to 20° dH,

**Lifespan** : 10 - 30 years

**Origin / Habitat** : China originally, then Japan, Asia and the rest of the world.

**Temperament / Behavior** : Very peaceful

**Breeding Goldfish / Mating / Reproduction** : Not very common in home aquariums but you can try. Make sure you are ready to deal with the babies before you start your breeding program. Give them a water temperature between 75°F and 80°F. Get them ready by feeding fish food high in protein and make sure that they have good water quality. When they are ready, they will lay their eggs on vegetation on the bottom of the tank. You will have to remove the adult fish to prevent them from eating the eggs which usually hatch within 7 days. Prepare your fry foods such as infusoria and brine shrimp and have it ready in time to feed the baby goldfish.

**Minimum Tank Size** : Preferably a 20 gallon or larger and 10 gallons for each additional goldfish if kept in groups.

**Compatible Tank Mates** : Usually do better when kept with other goldfish. Other potential tank mates include white cloud mountain minnows and similar cold water species. Watch closely if you introduce different species to your tank though and be prepared to remove them if it's not working out.

**Disease / Illness** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment - Unfortunately, they can be quite susceptible to swim bladder problems due to the various types or varieties that have been produced over the years. Ich or white spot disease and fungus problems are also frequently encountered.

**Fish Food / Diet** : Will gladly accept most fish foods, including flakes, live and freeze dried varieties. There are foods made specifically for goldfish. They are omnivorous, which means that they will eat foods of plant or animal origin.

**Tank Region** : All over the tank

**Gender** : Males may have small white spots called tubercles around their gill areas when ready to spawn. Females may be noticeably larger when swelling with eggs and the males may start to chase the females around the tank.

Author : Mike FishLore

**Recommended Reading :**

The Goldfish Doctor, By Elaine Rushmore

Goldfish Owners Manual

Guide to Fancy Goldfish

## HARLEQUIN RASBORA - TRIGONOSTIGMA HETEROMORPHA

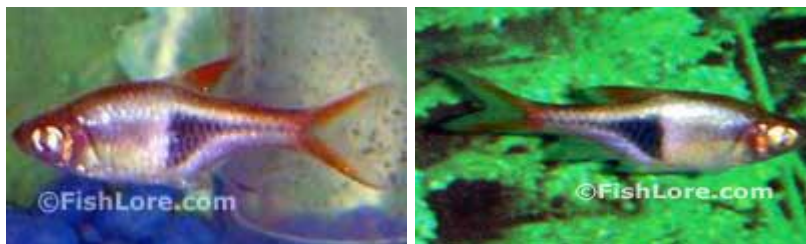
The Harlequin Rasbora is a longtime favorite for many hobbyists. The Harlequin Rasbora has the signature black triangle shape that starts at the dorsal fin and continues to the caudal fin. The Harlequin Rasbora is fairly hardy but they should only be added to tanks that have completed the aquarium nitrogen cycle. This rasbora is a schooling fish and will be happy with 6 or more of its own kind. They make a great addition to heavily planted tanks and community tanks.

The Harlequin Rasbora is sometimes confused with the Lambchop Rasbora (*Trigonostigma espei*) but the Lambchop Rasbora's black region starting at the mid-section (dorsal fin) is not quite as large at the beginning of the black region and is shaped more like a "lamb chop" instead of the black triangular shape of the Harlequin.

It's always a good idea to keep any new fish in a quarantine tank including the Harlequin Rasbora for a few weeks for monitoring before introducing them into your main tank. Even though this fish is farm raised they still have to go through several holding tanks before they reach your retail store and they have been in contact with who knows what.

The Harlequin Rasbora will accept smaller fish food including flakes, frozen, freeze dried and live foods.

### Harlequin Rasbora Picture



### Harlequin Rasbora Profile Facts and Care Information

**Scientific Name :** *Trigonostigma heteromorpha*

**Common Names :** *Red Rasbora, Harlequin Fish*

**Care Level :** Easy to Moderate, but only add to a tank that has already been through the aquarium nitrogen cycle.

**Size :** 2 inches (5 cm)

**pH** : 5.5 - 7.0

**Temperature** : 72°F - 80°F (22°C - 27°C)

**Lifespan** : 3 - 5 years

**Origin / Habitat** : Thailand

**Harlequin Rasbora Temperament / Behavior** : A peaceful fish and best kept in a small school (shoal) of 6 or more.

**Breeding / Mating / Reproduction** : They have been bred in captivity and are egg layers. Lays eggs underneath leaves.

**Tank Size** : 20 gallon minimum (schooling fish)

**Compatible Tank Mates** : They are a very peaceful little fish. Keep them in a small school and try not to keep them with larger fish that may be tempted to eat them or fish that may harass them.

**Fish Disease** : [Freshwater Fish Disease](#)

**Diet / Fish Food** : Omnivore - provide a varied diet with live food, frozen food and they should accept flake food.

**Tank Region** : Middle to top

**Gender** : Females are usually larger.

**Author** : [Mike FishLore](#)

**Fish Lore Forum** : [Harlequin Rasbora Forum](#)

## KOI (CYPRINUS CARPIO) KOI POND FISH

The Koi is a carp that was selectively bred originally in Japan for desirable colors. Koi can get to be very large with 2 feet plus being a common size for adult fish. Because of their large size Koi are pond fish and they do best in large outside ponds. Each fish needs several hundred gallons of water to adequately care for them. A common mistake is to buy too many fish for your pond. While young, the volume of water in the pond may be fine, but as these fish grow they will need larger volumes of water to prevent growth stunting.

There are many Koi varieties available with some fetching ridiculous prices. The names of various koi are based on the patterns and colors exhibited by the fish. The Tancho variety is highly sought after having a primarily pure white body with an orange colored pattern on the top of the head. It is a beauty.

People often confuse goldfish and koi. These fish are similar, both being carps, but koi get much larger and have barbells on the sides of the mouth that they use for foraging and finding food. They also have similar care requirements such as feeding and temperature but Koi need much larger living quarters than goldfish.

The great thing about keeping Koi is that they can and will develop personalities which makes them great pets. This fish lives for a very long time with a life span of 20 years or more if cared for properly. Proper care means providing large enough volumes of water, feeding high quality foods and keeping the water clean. Clean out the pond filter media often and remove debris from the water surface and the substrate on a regular basis.

Overall, the Koi is a fantastic fish for the properly sized pond. Keeping them in climates where it drops below freezing or gets above 90 °F (32 °C) for extended periods of time will be difficult. If you do live in an area like this, you will need a deeper pond that is if you're even able to have one.

### Koi Pictures



Photos Sent in by Kristen A.



It'd be cool to have the various koi varieties pictured here. If you would like to share your photos, send them in and we'll post them here. Include your name in the email if you want your name displayed as the photo credit. Photos have to be yours and not lifted from the internet!

### Koi Fish Profile and Koi Care Information

**Scientific Name** : Cyprinus carpio

**Common Names / Types** : Koi, Carp, Leather Carp

**Bekko** - most often a white koi with black patterns.

**Kohaku** - a white fish with red patterns. No other colors besides red and white should be present for show quality Koi.

**Ogon** - sometimes also called a lemon koi, these are usually gold or silver in color.

**Taisho Sanke** - has three colors, white, red and black.

**Tancho** - a prized variety that is white with a bit of orange on top of the head.

There are many more types available with more being developed by breeders.

**Koi Care Level :** Moderate - these fish are quite hardy once established but require very large living quarters in outside backyard ponds.

**Size :** Can grow to be 36 inches (92 cm) or bigger!

**pH :** 6.5 - 7.5

**Temperature :** 36°F - 85°F (2°C - 30°C)

**Water Hardness :** 5° to 15° dH,

**Koi Lifespan :** Thought to be able to live for 100 years or more - 20 years or more in a backyard pond. The record for longest lived koi is thought to be 200 plus years.

**Origin / Habitat :** They have been kept in Japan and other parts of Asia for hundreds of years. Other parts of the world have been farm raising this fish for several decades.

**Koi Temperament / Behavior :** They can get quite large and may become more aggressive when ready to breed. Males may chase, bully, bump and pester the females. Smaller fish kept in the pond may become food for the larger fish.

**Breeding Koi / Mating / Reproduction :** It can be quite difficult to breed them in a backyard pond since they will eat the eggs. They spawn in late spring / early summer. To successfully breed koi you will need to do a couple of things. The first is to have suitable spawning sites in the pond. The second is to prepare them for spawning by feeding them a high quality diet.

Slowly increase the amount of high protein fish foods over a period of several weeks to get the Koi ready. Spawning sites can be a little tricky. The females will look for heavily planted areas to deposit their eggs. Another alternative if you don't have many plants in your pond is to create a spawning mop out of a rock and some yarn. To create a mop, you tie the rock into the center of many long pieces of yarn. The rock is used to sink and hold the yarn. The females will drop the eggs and the males will fertilize them.

Once you have fertilized eggs, they will hatch in about 5 days and you need to have suitable foods ready to feed the baby koi once they are swimming. Suitable foods would be brine shrimp and other small fry foods. Crushed flakes can be offered after a few weeks.

**Koi Pond Size :** Because of their large adult size, they need a pond of 1000 gallons (3785 liters) or larger.

**Koi Compatible Tank Mates :** Best kept with other Koi, maybe the common plecostomus.

**Koi Disease / Illness :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment - Ick (Ichthyophthirius multifiliis) and Costia (Ichthyobodo necator) can be deadly along with secondary fungus infections caused by these parasites. They can also get flukes and worms. Keep their water clean and quarantine new arrivals for several weeks before acclimating them to your pond.

**Koi Food / Diet :** This fish is an omnivore, which means that they will eat both plant and animal matter. For optimum growth and color they need to be fed a high quality and varied diet. It can be easy to overfeed Koi since they are like little puppy dogs begging for food when they see you. Resist this temptation to keep your pond clean and your fish healthy! There are koi pellets and flakes that provide a balanced diet and these are recommended for the main portion of their diet. Use caution if using live foods such as feeder guppies or other small fish species since they could introduce disease to your pond. Worms will be relished and can be given to your pond fish occasionally.

**Koi Gender :** It can be somewhat difficult to determine sexual differences between the genders until they mature. They should be ready to breed around age three. Males may develop small white spots called tubercles around their gill areas when ready to spawn. Females will become larger or plumper when swelling with eggs. Watch for the males to start chasing the females around the pond. It's a good idea to keep more females than males so that the aggression by the males is spread out amongst the various females.

**Fish Lore Forum :** [Koi Forum](#)

**Author :** [Mike FishLore](#)

**References :** [Koi Super Simple Guide](#)



## ODESSA BARB - PUNTIUS SP.

The Odessa Barb can rival the colors of most saltwater species. Odessa Barbs are considered hardy and will tolerate a wide range of water parameters but will thrive in well planted tanks that are slightly on the acidic side of the pH range. The Odessa Barb may be difficult to find at your local fish store, but ask your store to order some for you. You may be required to leave a small deposit but it will be well worth getting a school of these beauties.

The male Odessa Barbs are usually the colorful ones while the females become plumper when developing eggs. If you want to try your hand at breeding them you will need a bare bottom tank and you will have to remove the adults after they have fertilized the eggs. It should take 3 to 5 days for the eggs to hatch. Be ready to feed them infusoria for the first few weeks and then baby brine shrimp. Frequent partial water changes (daily) are required during the grow out stages as well.

Odessa Barbs are not picky eaters and they should eat most fish food that hits the tank water. Give your Odessa Barb some live or frozen fish food occasionally and they will reward you with great coloration and lots of activity.

If you get a school of these Odessa Barbs, you might see some territorial aggression or tests of dominance among the males. These little battles shouldn't last long and they really should not be cause for concern. If it gets out of hand though, be prepared to separate the weaker fish. The Odessa Barb should play nicely with the other fish in the tank but watch for fin nipping. Fin nipping may be reduced if you keep a school of Odessa Barbs in your tank.

### Odessa Barb Picture



Photo Credit: Chris Dickhoff

### Odessa Barb Profile Facts and Care Information

**Scientific Name :** Puntius sp.

**Common Names :** *Odessa Barb, Scarlet Barb, Ticto Barb*

**Care Level :** Easy

**Size :** 3 inches (8 cm)

**pH :** 6 - 7

**Temperature :** 70°F - 78°F (21°C - 26°C)

**Water Hardness :** 2° to 10° dH

**Origin / Habitat :** Indonesia, Sumatra

**Lifespan :** 3 years or more

**Temperament / Behavior :** The Odessa Barb can be aggressive with other Odessas in the same tank and it is usually the males bickering over a dominance position within the school. They may also nip at slower moving fish with larger fins, such as Angelfish.

**Breeding / Mating / Reproduction :** An egg scatterer, it can be difficult if not impossible to breed in a community aquarium. A bare bottom breeding tank will increase your chance of success as well as a slightly lower pH. Remove the adults after they have dropped and fertilized the eggs.

**Tank Size :** 10 gallon for one - you'll need a larger tank when keeping multiples.

**Compatible Tank Mates :** Slow swimming fish and fish with larger fins may make an attractive nipping target for this Barb.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Omnivore, will accept flake, freeze-dried and live foods. Vary their diet but try to give your Odessa Barb a good quality flake food as the main source of their nutrition.

**Tank Region :** This is a relatively fast swimming fish that will roam all over, but mostly stays in the middle region of the tank.

**Gender :** The female is usually bigger and the males should develop more coloration as they mature.

Author : Mike FishLore

Fish Lore Forum : Odessa Barb Forum

## RAINBOW SHARK - EPALZEORHYNCHOS FRENATUS

The Rainbow Shark is a freshwater cyprinid that comes from Thailand and may not be a good choice for a community tank. The Rainbow Shark likes to stake out their own territory in the tank. This territory can be in the form of small caves, rocks and even plants. They will become aggressive with smaller fish that invade this territory. Only keep one Rainbow Shark in your tank because they will not tolerate another Rainbow or Red Tail Sharks in the same tank. They may exist together for a while, but one will end up chasing the other relentlessly until the other succumbs.

The Rainbow Shark will eat most fish food including flakes, pellets and frozen foods. They will eat algae wafers as well.

Breeding this freshwater Rainbow Shark is rare in the home aquarium. This is most likely because of their intolerance of each other in the small confines of the home aquarium.

You will need a good tight fitting hood with no escape points because the Rainbow Shark has been known to jump out of the tank.

### Rainbow Shark Picture



### Rainbow Shark Profile Facts and Care Information

**Scientific Name :** Epalzeorhynchos frenatus

**Common Names :** *Rainbow Shark, Red Fin Shark, Red Shark, Ruby Shark, Albino Rainbow Shark*

**Care Level :** Easy

**Size :** 6 inches (15 cm)

**pH :** 6.5 - 7.5

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Lifespan :** 5 - 8 years.

**Origin / Habitat :** Thailand, Indonesia

**Rainbow Shark Temperament / Behavior :** This fish can become aggressive with other, smaller fish in your tank that invade its territory. They will fight with the Red Tail Shark. Provide plenty of hiding places (caves, rocks and plants)

**Breeding / Mating / Reproduction :** Because they will fight with other rainbows, breeding them in the home aquarium is rare.

**Tank Size :** 55 gallon (208 liters)

**Compatible Tank Mates :** Because of their temperament it is a good idea to house them with similar sized fish. Do not keep with other Rainbow sharks and Red Tail Sharks

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** An herbivore - provide a varied diet with algae wafers, pellet food and frozen food.

**Tank Region :** Mostly bottom to middle

**Gender :** On males, the anal fin is outlined in black

**Fish Lore Forum :** Rainbow Shark Forum

**Author :** Mike FishLore

## RED TAIL SHARK - EPALZEORHYNCHUS BICOLOR

The Red Tail Shark (*Epalzeorhynchus bicolor*) has a black body with a red tail and sort of resembles a shark (hence the name). It is best to keep one Red Tail shark in your tank because they will become very aggressive and territorial towards each other when kept in multiples. Avoid the temptation to keep them with a Rainbow Shark or other Red Tailed Sharks.

Many hobbyists mistakenly add multiple Red Tail Sharks to a small tank only to find out that one of them will soon become the dominant "shark". The dominant one will chase and pester the others relentlessly. Any time the submissive sharks try to get to food the dominant one will chase it away. They really can become quite obnoxious which is why we recommend keeping only one unless you have a much larger tank.

Provide your Red Tail Shark with many hiding places to help make them feel secure and have a tight fitting hood because they are also known to be excellent jumpers.

They love to scavenge all over the tank looking for food and will accept most fish foods including flakes, frozen, freeze dried and live foods.

### Red Tail Shark Fish Picture



### Red Tail Shark Profile Facts and Care Information

**Scientific Name :** *Epalzeorhynchus bicolor*

**Common Names :** *Red Tailed Shark, Red Tail Black Shark, Red Tailed Labeo, Fire Tail, Labeo bicolor*

**Care Level :** Easy, good for freshwater beginners

**Size :** Up to 6 inches (15 cm)

**pH** : 6.5 - 7.5

**Temperature** : 73°F - 79°F (23°C - 26°C)

**Water Hardness** : 10° to 16° dH,

**Lifespan** : 5 - 8 years

**Origin / Habitat** : Thailand

**Red Tail Shark Temperament / Behavior** : These fish can be hostile and are not recommended for community fish tanks with smaller tropical fish. They seem to behave when kept with larger fish.

**Red Tail Shark Breeding / Mating / Reproduction** : Very difficult to breed in the home fish tank.

**Tank Size** : 55 gallon

**Red Tail Shark Compatible Tank Mates** : Larger tropical fish given their aggressive nature but none large enough to eat them. It is not recommended to keep them with the Rainbow Shark unless your tank is sufficiently larger.

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Omnivore and primarily a scavenger. They will go after most of what you put in the tank including flakes, live and freeze dried foods.

**Tank Region** : Middle and bottom

**Gender** : Hard to determine, but the female may have a grayer stomach whereas the males are solid black.

**Author** : Mike FishLore

**Fish Forum** : Red Tail Shark Forum

## ROSY BARB - BARBUS CONCHONIUS

The Rosy Barb is also known in certain circles as the Red Barb and is a popular freshwater tropical fish that will bring a lot of activity to your tank. The Rosy Barb is generally peaceful but like many barbs, can become fin nippers if they are not placed in a small school of 5 or more. They are also very aggressive eaters and will accept flake fish food with gusto.

Many have reported breeding success with the Rosy Barb by using broad leaved plants on which the female will lay its eggs. Adults will eat the eggs so you must separate them if you want to raise the fry.

The Rosy Barb will accept nearly all foods including flakes, frozen, freeze dried and live foods.

### Rosy Barb Picture



### Rosy Barb Profile Facts and Care Information

**Scientific Name :** Barbus conchonius

**Common Names :** *Rosy Barb, Rosie Barb, Red Barb*

**Care Level :** Easy, good for freshwater beginners

**Rosy Barb Size :** 4 inches (10 cm)

**pH :** 6 - 7

**Temperature :** 65°F - 78°F (18°C - 26°C)

**Water Hardness :** 5° to 15° dH

**Origin / Habitat :** India

**Lifespan :** 3 - 4 years



**Rosy Barb Temperament / Behavior** : These fish are generally peaceful but if you don't have a small school of them (usually 5 or more) they can become fin nippers. Getting only of couple of them will surely bring out their fin nipping behavior.

**Rosy Barb Breeding / Mating / Reproduction** : Breeding the Rosy Barb can be fairly easy. They are egg layers and they will eat the eggs. Provide plenty of broad leaf plants for them to scatter their eggs on. Separate the adults from the eggs if you plan on raising the fry. Feed the fry baby brine shrimp.

**Tank Size** : 20 gallon or larger.

**Rosy Barb Compatible Tank Mates** : Avoid keeping them with tropical fish that are long-finned and slow moving. They will most likely not do well with the Rosie Barb.

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Omnivore, does well on a varied diet of flake, live and freeze dried fish food.

**Tank Region** : All over the tank

**Gender** : Like many tropical fish, the male is usually more colorful and has more red coloration. The female will most likely not have the red colors or if they do, just a slight amount of red and will mostly have yellow, olive or gold coloration.

**Author** : Mike FishLore

**Fish Forum** : Rosy Barb Forum

## ROSY RED MINNOW - PIMEPHALES PROMELAS



Rosy Red minnows are mostly sold as feeder fish in fish stores. Rosy Red Minnows are the fish that you'll see 500+ packed into a small tank. Because of these conditions, they are often disease ridden - fungal infections, bacterial infections, and parasites. They come in different color variations - rosy reds being pink, and the natural fat head color of brown.

If being used as a feeder, the Rosy Red Minnow need to be quarantined, and medicated so that it will not pass on disease to your larger fish. It is best to breed your own rosy reds if you plan on using them as feeders.

If you plan on keeping them in a community aquarium they should also be treated for parasites. They make wonderful additions to both cool water and tropical aquaria due to their very hardy nature. They will school, so keeping a minimum of three is best with a ratio of one male to two females.

Rosy Reds are a popular pond fish, often used as a dither fish for fancy goldfish and koi. In a pond they will keep the insect larvae to a minimum, but will also eat goldfish and koi pellets. They are active even when the pond freezes over in the winter, and can often be seen swimming under the ice.

The Rosy Red Minnow are a very inexpensive, hardy fish. They are a great addition to someone who wants a cool water tank but does not have the room to house goldfish. Or to someone who just wants something different in their tropical community tank.

The male Rosy Red Minnow will care for their eggs and fry. Their breeding behavior is somewhat similar to cichlids. Overall this is a much underappreciated fish that would make a great addition to just about any aquaria. It is a great fish for someone wanting to try their hand at breeding egg layers for the first time.

[Rosy Red Minnow Profile and Care Information](#)

**Scientific Name :** Pimephales promelas

**Common Names :** *Rosy Red Minnow, Fathead minnow, Tuffies, Rosies, Red Top Minnows, Blackhead Minnow, Bait Fish, Feeder Fish*

**Care Level :** Easy and very hardy fish, good for beginners.

**Size :** 2 - 3 inches (8 cm)

**pH :** 7.0 to 8.0

**Temperature :** 50 - 78 °F

**Lifespan :** 1 to 3 years, possibly longer

**Origin / Habitat :** Mostly all over North America with introduced species in other parts of the world with sometimes adverse consequences.

**Temperament / Behavior :** Peaceful. Does great in a community tank of cool water fish. Be wary when housing with larger fish, as the rosy reds will be eaten. Males will become protective over egg site, so be careful if breeding in a community aquarium.

**Breeding / Mating / Reproduction :** Egg layer. Very easy to breed in home aquaria. Although they mature at around 6 months of age, they normally do not breed until they are 1 -2 yrs. old. Females will lay eggs in the spot the male has found, usually a flat/hard surface of a log, rock, or leaves. Eggs will hatch in roughly 5 days, depending on temperature. Males maintain the nest and eggs, fanning and protecting them. The males will also protect gravid females. After fry become free swimming (2-3 days), they can be fed infusoria and newly hatched brine shrimp.

**Tank Size :** minimum of 10 gallons. This is a social species that must be kept in a group of at least 3. These fish are very popular in outdoor ponds, and will thrive in this environment.

**Compatible Tank Mates :** Any cool water species that are not a threat to eat them. White cloud Minnows, hillstream loaches, dojo loaches, goldfish.

**Fish Disease :** Freshwater Fish Disease Often have internal parasites from cramped conditions in fish stores.

**Diet / Fish Food :** Omnivorous. Will eat goldfish flakes and pellets. Also enjoys veggie greens and live food such as insect larvae.

**Tank Region :** Middle to bottom of the aquarium

**Gender :** Males are larger with rounder fins.

**Profile by :** Amanda

**Photo Credit:** Enziarro - wikipedia

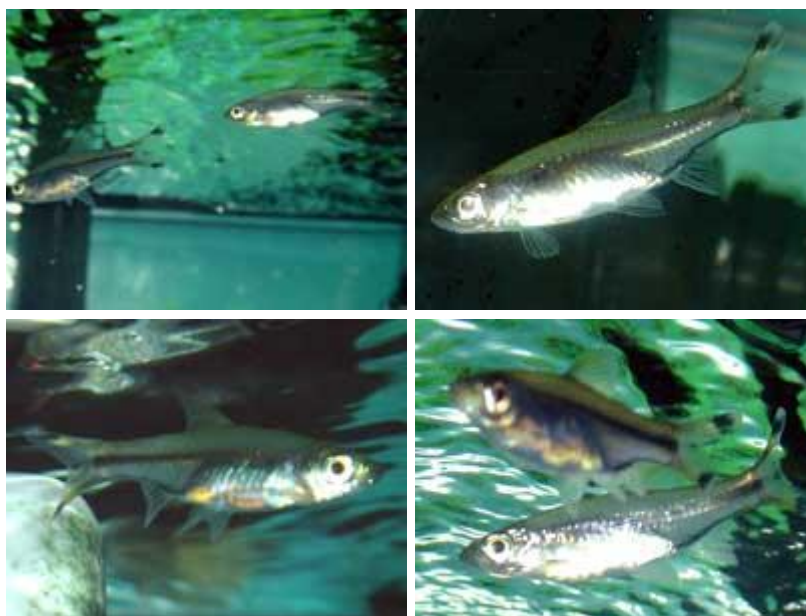
## SCISSOR TAIL RASBORA - RASBORA TRILINEATA

The Rasbora trilineata or Scissor Tail Rasbora is also called the Three Lined Rasbora in some places. The Scissor Tails have a forked tail (caudal fin) that has black and white markings on it that are similar to the dorsal fin on the pristella tetra. There is a horizontal black bar on the mid-section that runs the length of the body. The forked tail gives them a unique swimming style that is the reason for the common name. Their tail makes an opening and closing scissor like motion while swimming.

If you're looking for a nice, easy going community fish for the top parts of your freshwater fish tank this Scissor Tail Rasbora may be for you. They will bring lots of activity to the top levels of your aquarium and should not bother any of their tank mates.

Feeding the Scissor Tail Rasbora should not pose a problem since they will take flakes, frozen and freeze dried foods. They especially like freeze dried blood worms, but don't overdo it. A little bit of the freeze dried bloodworms goes a long way and only give them this food as a treat every once in a while. A good quality flake food should serve as the main part of the Scissor Tail Rasbora's diet.

### Scissor Tail Rasbora Pictures



### Scissor Tail Rasbora Profile Facts and Care Information

**Scientific Name :** Rasbora trilineata

**Common Names :** *Scissor Tail Rasbora, Three lined Rasbora, Black Scissor Tail*

**Care Level :** Fairly easy, good for freshwater fish beginner

**Size :** 5 inches (13 cm)

**pH :** 6 - 8

**Temperature :** 72°F - 79°F (22°C - 26°C)

**Water Hardness :** 5° to 15° dH,

**Scissor Tail Rasbora Life Span :** 5 years, sometimes longer

**Origin / Habitat :** Found in slow moving rivers and streams of Asia and Sumatra, Borneo

**Scissor Tail Rasbora Temperament / Behavior :** This rasbora is very peaceful and should do well in a community type setting. They do enjoy schooling, so groups of 5 or more would work well.

**Scissor Tail Rasbora Breeding / Mating / Reproduction :** Can be difficult since they are supposed to hide their eggs under a rock or similar item in the tank and will leave them unprotected. Low light tanks with small drops in pH have been reported to induce spawning behavior.

**Tank Size :** 20 gallon or larger.

**Scissor Tail Rasbora Compatible Tank Mates :** Peaceful tetras and other rasboras, smaller bottom dwelling species such as the Corydoras Catfish.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Omnivore, they will eat many fish foods including flakes, freeze dried and live foods. As with many fish, try to vary their diet for optimum health and colors. They eat insects in the wild but this can difficult to provide in the home aquarium.

**Tank Region :** Can range from the middle to the top, but mostly on the top of the tank.

**Gender :** Difficult to determine, but the female may be more round in shape.

**Author :** Mike FishLore

## TIGER BARB - PUNTIUS TETRAZONA

The Tiger Barb has black bands that run vertically on an orange/gold body. There are also a few different varieties such as the Albino and the Green.

Stocking this species in a community tank can be risky. The Tiger Barb is a very active tropical fish that has a reputation for nipping the fins of its tank mates. This fin nipping behavior is most often attributed to not having enough tiger barbs in the tank. With that being stated, they do best when kept in schools of 6 or more. Given their somewhat aggressive nature, it might be a good idea to think twice before adding this barb (or school of them) to a community tank.

The Tiger Barb will take regular tropical fish flakes but you should try to supplement their diet every once in a while with brine shrimp or krill.



Photo Credit: Julie Hallahan

### Tiger Barb Profile Facts and Care Information

**Scientific Name :** *Puntius tetrazona*

**Common Names :** *Sumatra Barb, Green and Albino, Part belt Barb*

**Care Level :** Easy

**Size :** 3 inches (8 cm)

**pH :** 6 - 7.5

**Temperature :** 70°F - 78°F (21°C - 26°C)

**Water Hardness :** 5° to 15° dH

**Origin / Habitat :** Indonesia, Sumatra, Borneo

**Lifespan :** 5 years

**Temperament / Behavior :** They can be semi-aggressive. They do best when kept in a school of 6 or more. Getting only of couple of them will surely bring out their fin nipping behavior.

**Tiger Barb Breeding / Mating / Reproduction :** Breeding them can be somewhat difficult. Barbs are egg layers and they will eat the eggs. Provide plenty of broad leaf plants for them to scatter their eggs on. Separate the adults from the eggs.

**Tank Size :** 20 gallon or larger.

**Tiger Barb Compatible Tank Mates :** Avoid keeping them with tropical fish that are long-finned and slow moving. They will most likely not do well with this fish.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Omnivore, will accept flake, freeze-dried and especially live foods such as [brine shrimp](#).

**Tank Region :** Middle

**Gender :** The female is usually bigger and the male may develop a red coloration on its nose.

**Fish Lore Forum :** [Tiger Barb Forum](#)

**Author :** [Mike FishLore](#)



## TINFOIL BARB - BARBUS SCHWANEFELDI

The Tinfoil Barb is a fish that is often available in pet shops and sold to the beginning aquarist but it is not the best choice for those beginning in the freshwater hobby. The tinfoil barb requires a very large tank, at least 75 gallons (284 liters) for one and a much larger aquarium when keeping these barbs in multiples because of their potential adult size of 13 inches (32 cm). They like to have lots of space for swimming and they are indeed fast swimmers. They also like to jump out of tanks that don't have tight fitting hoods.

The sides of the Tin foil Barb resemble tin foil (hence the name) and the fins on this barb will become more red as they mature. Juveniles (pictured below) lack the red on the fins. The second picture is of a mature tinfoil barb that is around 10 inches in size.

Tin foil Barbs will accept most fish food, including flakes, pellets, frozen and freeze-dried foods. They will also go after your live plants and any smaller fish if given the opportunity.

### Tinfoil Barb Picture



### Tinfoil Barb Profile Facts and Care Information

**Scientific Name :** *Barbus schwanefeldi*

**Common Names :** *River Barb*

**Care Level :** Easy to Moderate, this fish needs a larger tank

**Size :** 13 inches (32 cm)

**pH** : 6.0 - 7.5

**Temperature** : 75°F - 80°F (24°C - 27°C)

**Tinfoil Barb Life span** : 8 - 10 years

**Origin / Habitat** : Rivers in Thailand and Sumatra

**Tinfoil Barb Temperament / Behavior** : This fish can be peaceful enough for a very large community tank, but it may eat smaller fish.

**Tinfoil Barb Breeding / Mating / Reproduction** : May be possible to breed in the home aquarium. You would need a very large tank to house the adults. Egg layer that likes higher temperatures (77 - 80°F) for breeding. Remove adults to keep them from eating the eggs.

**Tank Size** : 75 gallon (284 liters) minimum

**Tinfoil Barb Compatible Tank Mates** : May go well with Bala Shark, Pleco, Silver Dollar and other large fish

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : An herbivore - provide a varied diet with algae wafers, pellet food and frozen food.

**Tank Region** : Mostly middle to top

**Gender** : Difficult to determine

**Author** : Mike FishLore

**Fish Lore Forum** : Tinfoil Barb Forum

## WHITE CLOUD MOUNTAIN MINNOW - TANICHTHYS ALBONUBES

The white cloud mountain minnow is an extremely hardy fish that can withstand a wide range of temperatures. The white cloud mountain minnow can be kept in an aquarium without a heater as long as the temperature does not drop below 45°F (7°C). They are peaceful and are suitable tank mates for a community tank as long as the aquarium temperature doesn't get too high. Many keep these minnows in small desktop tanks.

The White Cloud Mountain Minnow will eat flakes, frozen, freeze dried and live foods.

### Picture



Photo Credit: catsma\_97504

### White Cloud Mountain Minnow Profile Facts and Care Information

**Scientific Name :** *Tanichthys albonubes*

**Common Names :** *Meteor Minnow, Chinese Danio*

**Care Level :** Easy, good for freshwater beginners

**Life span :** 3 - 5 years generally, possibly longer

**Size :** Up to 2 inches (5 cm)

**pH :** 6 - 8

**Temperature :** 45°F - 70°F (7°C - 21°C)

**Water Hardness :** 5° to 25° dH,

**Origin / Habitat :** China

**White Cloud Mountain Minnow Temperament / Behavior** : Peaceful and best kept in schools of 6 or more.

**Breeding / Mating / Reproduction** : Easy. Give them a water temperature around 68°F and they will lay their eggs on the bottom of the tank. You will have to remove the adults because they will eat the eggs.

**Tank Size** : 5 gallon or larger.

**Compatible Tank Mates** : Many, given the generally peaceful nature of the White Cloud Mountain Minnow.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / [Fish Food](#)** : Omnivore - will eat many food items including flakes, pellets and live foods.

**Tank Region** : All over the tank

**Gender** : Males will have more color than the females.

**Author** : [Mike FishLore](#)

## ZEBRA DANIO - DANIO RERIO

The Zebra Danio is one of the most popular tropical fish for many reasons. They are very hardy, attractive to look at and they usually do well in groups of 6 or more. The Zebra Danio is a good first fish for beginners to the tropical fish hobby because of their tolerance of a wide range of water parameters.

Because of their hardiness, many will use zebra danios to cycle their new tanks. This is not a recommended practice because it can be very traumatic and stressful to the fish. They are frequently used as dither fish in aquariums since they are constantly out swimming all over the tank. Dither fish are used to help calm other fish that may be skittish. The scared fish will see the danios out swimming and may become more comfortable with their environment.

Behavioral problems with the Zebra Danio, such as fin nipping, can usually be attributed to not having enough of these schooling fish in your tank. To prevent this fin nipping behavior try to keep a school of 6 or more in your tank.

They will eat vitamin enriched flakes, frozen, freeze dried and live foods.

### Zebra Danio Photo



### Zebra Danio Profile Facts and Care Information

**Scientific Name :** Danio rerio

**Common Names :** *Zebra Fish, Striped Danio*

**Care Level :** Easy

**Size :** Up to 2 inches (5 cm)

**pH :** 6.5 - 8

**Temperature** : 65°F - 75°F (18°C - 24°C)

**Water Hardness** : 5° to 25° dH,

**Lifespan** : 2 - 5 years

**Origin / Habitat** : India

**Zebra Danio Temperament / Behavior** : They are usually peaceful but they can be fin nippers. They are best kept in schools of 6 or more.

**Zebra Danio Breeding / Mating / Reproduction** : Easy. Maintain a water temperature of 78°F and the female will drop its eggs in the gravel bed. The eggs will hatch in two days and you will have to remove the adults because they will eat the fry.

**Tank Size** : 10 gallon or larger.

**Compatible Tank Mates** : Other Danios, Corydoras and some Tetras.

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Zebra Danio Diet / Fish Food** : They will take flakes, freeze dried (blood worms, daphnia, brine shrimp, etc) and live foods.

**Tank Region** : Middle to Top

**Gender** : Males have yellow in between the black stripes and female zebra danios are sometimes larger.

**Author** : Mike FishLore

**Fish Lore Forum** : Zebra Danio Forum

[Member's Betta Photos](#)

[Betta Fish Care Guide](#)

[Betta Breeding Guide](#)

[Betta Forum](#)

[Important Betta Topics](#)

The Betta fish is probably the second most popular fish kept, after Goldfish. The Betta Splendens is a favorite because of its beauty, its long fins and because bettas are relatively easy to care for. The male sports deep beautiful colors whereas the females are less colorful. Their stunning colors and flowing fins are some of the reasons for their popularity and the inexpensive purchase price (usually less than 5 dollars) helps too. However, due to this fish being such an easy sale it has led to some deplorable conditions in which they are kept while waiting to be sold. It is really sad to see how the Betta is kept in many chain pet stores in small jars or small cups, often in very soiled water.

Betta fish are called the Siamese Fighting Fish because of its behavior towards other males of the same species. You cannot keep two or more males in the same tank. If more than one male fish are placed in the same tank, they will fight until only one of them remains. They will flare out their gill covers and erect their fins showing the other fish their fighting posture. This behavior is also why they are kept separated in small containers at the store.

There are ways to see this behavior without introducing another male betta fish. One way is to use a small hand mirror and place it up against the tank glass so that the male may see his reflection. The Betta will mistake his reflection as another male and the fighting posture should then be displayed. Doing this too often may lead to an overly stressed fish though.

You can get small tanks that come with dividers which will allow you to keep two in the same tank. Many keep them in small bowls and they may live for a while in these small bowls. However, to get the most beautiful colors and optimal health for your fish, they will do better in a 10 gallon or larger tank with a heater that can maintain a constant temperature in the aquarium. If you

plan on keeping yours in a small betta aquarium, please read the [small tank setup](#) page for ideas on equipment needed. Also check out the [Betta Fish Tank Setup](#) article written by COBC for the magazine that lists the equipment needed to keep a betta.

## Betta Pictures



### Betta Fish Profile and Betta Fish Care Information

**Scientific Name :** *Betta splendens*

**Common Names :** *Siamese Fighting Fish*

**Care Level :** Easy, excellent fish that is good for freshwater beginners and can be just as hardy as goldfish.

**Size :** 2.5 inches (6 cm)

**Water Parameters :** pH 6 - 7.5 | Temperature 75°F - 80°F | Water Hardness 5° to 20° dH

**Betta Life span :** 2 - 3 years, possibly longer

**Origin / Habitat :** Thailand



**Temperament / Behavior** : Peaceful if given the right tank mates. They will become aggressive with other Bettas. They may also become aggressive towards other tropical fish with large fins such as guppies, angelfish and others.

**Breeding Bettas / Mating / Reproduction** : Can be difficult since the male will fight the female if not introduced at the right time. For more information please read the breeding bettas and general info or this one Breeding the Betta.

**Betta Tank Size** : Can be kept in small tanks as small as 2 gallons but they do best in larger tanks.

**Compatible Tank Mates** : Not many because of their temperament. Tropical fish with regular size fins may do well, but avoid tropical fish with larger fins like guppies or angelfish.

**Betta Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Carnivore primarily, but will take flakes, freeze dried and live foods. Blood worms and brine shrimp can be used as well as foods made specifically for bettas.

**Tank Region** : Top

**Betta Gender** : The male has much more color and bigger fins than the female.

**More Information** : Mahachai Betta

**Author** : Mike FishLore

## MAHACHAI BETTA



The Mahachai Betta is a wild caught betta. The Mahachai Betta is one of the newest additions to the Betta world. Scientists don't have as much information on these little fish as other fish, because they are still studying their behavior, water conditions, and they still need to verify that it is in fact a Betta and not some other type of fish.

Unlike the Betta everyone is used to seeing, Betta Splendens, this little fish is found in a brackish swamp just about 20km, or a half hour drive, outside of Bangkok, Thailand and their habitat is shrinking all the time due to commercial developments. This little fish resembles two other Bettas in behavior and in appearance, and those Bettas are Betta Smaragdina and Betta Imbellis. The males of this species is very dark, almost black and covered in metallic green. The females are browner with some of the metallic green. The mature males almost always have red eyes and a spade-shaped tail. Both the male and female have a little red tint on their fins, it isn't as bright as the regular betta everyone is used too. They grow to be one of the largest Splendens members, with slender and longer bodies than even the common betta. They reach a total of 2 inches when they are fully grown. Their body resembles more of a dolphin or orca than a common betta.

This is one of the most peaceful Bettas with the males being able to live in the same aquarium with the occasional territorial dispute. They are extremely terrified of people and if you turn on the light in the room where they are held, they will be seen darting to a dark corner of the tank. Unlike the common betta, these little Bettas can't be kept in the traditional jar, which some people still use but shouldn't. They will become totally stressed out and may even die due to it or not accept food because they feel threatened.

They should be kept in a 10 gallon tank that, like other Bettas, should not be completely filled to the top. They do best in slightly hard, slightly brackish, with tannins. The substrate should be fine gravel or silica sand. They like lots of hiding places made out of artificial or natural means. With leaf litter on the bottom, mostly Indian Almond Leaf, makes the water better by way of tannins for this fish. Clear water will cause lots of unneeded stress to the fish. Some of the best plants for the tank would be those that do well in brackish water.

The way they spawn is the same as with other betta species, just the female can stay in the same tank and doesn't need to be removed. If there are one male and many females, the male will mate with all the females and have all the fry and eggs in the same nest. The adults will ignore the free-swimming fry since they present no threat to the adults. The raising of the fry is the same as with the common betta, it just will take a lot longer than with the common betta. They would have trouble eating BBS so they should be fed vinegar eels, micro worms, etc. or micro-organisms in the tank. To compare the difference in growth rate between the common and the Mahachai; in 4-5 months, the common will be almost fully grown and will be able to be told if a male or female, while the Mahachai is still less than an inch in length and may be able to tell the genders apart.

## References

- Diana Heideman "Introducing the Mahachai Betta" SVAS Newsletter (pdf)

## BRACKISH WATER FISH SPECIES

### COLUMBIAN SHARK - HEXANEMATICTHYS SEEMANNI

The Columbian Shark seems to be one of those fish that are always at the pet stores, often incorrectly identified and/or with misleading or incorrect information. For the majority of home hobbyists (95 percent or more of us) the Columbian Shark is not a good fish to keep. Let me explain why...

They usually get lumped in with the freshwater fish species but this fish is not purely a freshwater fish. It is actually a brackish water species as juveniles that will slowly need to be acclimated to a full saltwater tank as they get bigger. The potential adult size of this fish is also often misrepresented. They can reach 20 inches (51 cm) or more in size if taken care of properly.

The other thing to keep in mind with the Columbian cats is that they are predators and will eat smaller tank mates once they get big enough. In fact, some hobbyists will feed them small feeder guppies as an occasional treat.

The Columbian Shark can be fairly active and will need lots of swimming room. Couple their activity levels with their potential adult size and you can start to realize that you will need a pretty big tank to keep these guys happy and healthy.

They should accept most fish foods including flakes, frozen, freeze dried and live foods. Drop in some sinking shrimp pellets or catfish pellets when the lights are turned off and let them scavenge around for them.

Colombian Sharks also have venomous dorsal spines, so be very careful when performing your tank maintenance. It's probably a really good idea to get some of those long rubber aquarium gloves.

#### Picture



## Columbian Shark Profile Facts and Care Information

**Scientific Name :** Hexanematichthys seemanni

**Common Names :** A very long list of common names: *Silver Tipped Shark, Tete Sea Catfish, White Tip Shark Catfish, Black Fin Shark, Christian Catfish, Jordan's Catfish, West American Cat Shark*

**Columbian Shark Care Level :** Moderate, needs a very large tank as adults

**Size :** Anywhere from 10 - 20 inches (25-51 cm) and sometimes even larger!

**pH :** 7 - 8

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 5° to 20° dH

**Specific Gravity :** 1.005 - 1.010, saltwater as adults (1.020 - 1.025)

**Lifespan :** 10 - 15 years or longer

**Origin / Habitat :** Wild caught specimens originate from Central America, Guatemala, South America and Southern Mexico. They are often found in coastal waters and brackish rivers.

**Temperament / Behavior :** Mostly peaceful but may eat smaller fish as it grows larger. Avoid keeping them with small fish such as neon tetras and guppies.

**Columbian Shark Breeding / Mating / Reproduction :** Very difficult, not sure if it has been accomplished in an aquarium. Males are mouth brooders.

**Tank Size :** 75 gallon (284 liters) minimum for one, much larger for multiples. This fish needs a large tank not only for it's size, but because it is a fairly active swimmer.

**Compatible Tank Mates :** Fish that tolerate brackish water conditions. Scats, Monos, Targetfish. When this freshwater/brackish shark gets big enough, it will start to eat much smaller tank mates.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Being catfish, they are primarily scavengers. They will constantly be looking for bits and pieces on the bottom of the tank. Give them sinking shrimp pellets, catfish pellets, prepared sinking foods and supplement with live or frozen foods such as blood worms.

**Tank Region** : Sometimes middle areas, but mostly on the bottom.

**Gender** : Hard to determine by external features.

**Author** : Mike FishLore

**Fish Lore Forum** : Columbian Shark Forum

## FIGURE 8 PUFFER FISH - TETRAODON BIOCELLATUS

The Figure Eight Puffer is an entertaining fish that's full of personality. The Figure 8 Puffer looks like young Green Spotted Puffers with unusual patterns, but they are truly very different fish with very different requirements. Figure 8's are a better choice for most aquarists than the GSP because their requirements are easier to meet. These puffers will only grow to about half the size of a GSP, thus they need only half the space. 15 gallons is sufficient for one puffer, with 10 gallons more for each additional puffer. Also, they are easier to keep because unlike the GSPs who need high brackish to marine as adults, the Figure 8's only need a low brackish of 1.005-1.008 throughout their lives. They also are a bit less aggressive than the GSP, so it's easier to keep them living in harmony, especially if they are all raised together from a young age. But don't be fooled, they can still get quite nasty at times.

The question of tank mates for the Figure 8 Puffer is open to debate. Some have reported at least short-term success with mollies, bumblebee gobies, and others. But really most fish will be pestered and nipped often. Also, an adult sailfin molly gets very large and will usually end up bullying the puffer instead of the other way around. Really the best thing to do is to keep a singleton, but groups of them can usually work if enough space and hiding places are provided. Also, some people say that F8's and GSP's can be kept together, but this is not a good idea. Not only do they have very different salinity requirements, but when the GSP gets larger and much more aggressive the Figure Eight will likely be bullied and picked on constantly.

A healthy diet is a crucial part of keeping any puffer. Most important is foods that will grind down their ever-growing teeth. Snails are excellent for this, as well as clams and other hard crustaceans still in their shells. Other good foods for them are things such as bloodworms, blackworms, brine shrimp, mysis shrimp, etc.

Puffers appreciate a complex layout of decor to explore, as well as ample swimming room. If your puffer is just pacing the glass, it's probably bored! They are very personable creatures, and will come to recognize their owner and also the food container. They make great pets and will give you years of enjoyment.



## Figure 8 Puffer Fish Profile and Care Information

**Scientific Name** : Tetraodon biocellatus

**Common Names** : *Figure eight puffer*, *Eyespot pufferfish*, *F8 puffer*

**Care Level** : Moderate

**Size** : 3" (8 cm)

**pH** : 7.6 - 8.3

**Specific Gravity** : does best in brackish of 1.005-1.008 SG

**Temperature** :78-82 F (25-28 C)

**Lifespan** : about 15 years

**Origin / Habitat** : Asia and India in brackish streams and estuaries.

**Temperament / Behavior** : semi-aggressive fin-nippers

**Breeding / Mating / Reproduction** : practically non-existent in captivity

**Tank Size** : 15 Gallons recommended, 10 gallons more for each additional figure 8 puffer

**Compatible Tank Mates** : Best kept alone, can often be kept with other figure eights. Other possible tank mates include brackish gobies such as the bumblebee or mollies, but success is not very likely.

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment - Be sure to quarantine, as they are wild caught and often come in with parasites.

**Diet / Fish Food** : When young: snails, brine shrimp, bloodworms, blackworms, mealworms, plankton, krill, crickets, cockles, prawns, whitebait, daphnia, ghost shrimp, clams, mussels, squid, scallops, shrimp, crab legs, oysters, lobster, and crayfish.

**Tank Region** : Middle. Active swimmers.

**Gender** : Even for experts, it is nearly impossible to sex them. Usually the only way is by dissection, or if they happen to lay eggs (an unlikely occurrence).



## References

Aqualog: The Puffers of Fresh and Brackish Waters by Klaus Ebert

Photo Courtesy jgon\_

About the Author : See [pinkfloydpuffer's member spotlight](#)

## GREEN SPOTTED PUFFER - TETRAODON NIGROVIRIDIS

The Green Spotted Puffer is a highly unique and interesting fish. Unfortunately the Green Spotted Puffer (GSP) is often misunderstood. Commonly sold as a freshwater fish, the GSP will only do well without marine salt in its water for a very short time. A good brackish setup is needed for health and longevity of the Green Spotted Puffer. They should be kept in large aquariums, with no less than 30 gallons per puffer, as they grow to be six inches.

A big issue with these fish is the question of tank mates. Some have reported success in keeping the Green Spotted puffers with the Figure Eight Puffer, which when young looks very similar to the Green Spotted Puffer. However, the Figure 8 will only get to 4" and is much less aggressive, while the GSP will get up to 6" and is extremely aggressive as an adult. Some other possible tank mates could be mollies, scats, monos, archerfish, and bumblebee gobies. However, it is not uncommon for a puffer to get along with one of these tank mates for many months and then as soon as a sign of weakness shows or space becomes crowded, the puffer will eat the other fish. The best setup for them is species only, with either only one specimen or a large tank with several GSPs.

These puffers require immaculate upkeep. They are scale less and lack gill covers, so they should only be placed in a pre-cycled aquarium. Weekly water changes are recommended, as well as over filtration. They are intolerant of ammonia and nitrite, and should be kept with low nitrates. The puffer's tank will soon be overrun with algae, but since there are no cleaners that will not be devoured by the puffers, it is up to the owner to take care of the algae. These fish are almost guaranteed to not breed in your aquarium. It is impossible to sex them, and nothing is known about the conditions needed for them to breed.

The Green Spotted Puffers sold at stores are always wild caught, and thus often come in with internal parasites. Be sure to quarantine them before adding them to your aquarium. When selecting a puffer a good way to tell if they are healthy is if they have a rounded stomach rather than a sunken in one. Also, their stomachs should be white instead of grey, and they should be actively swimming and acknowledge when people lean in to take a look at them. If a puffer has a grey belly and parasites are ruled out, the next most likely possibilities are improper salinity or poor diet. Although it's what they are famous for, you never want to see your puffer puff up. This is only triggered from extreme stress, and usual ends with the fish's death. Be careful when transporting puffers so they don't puff up. It's best to move them from place to place by directing them into a bag rather than netting them. While puffing in the water is dangerous to them, puffing in the air will almost certainly be fatal.

Green Spotted Puffers will usually eat everything they can, and will literally eat themselves to death. It's better to give them a smaller, healthy diet rather than overfeeding. Variety is the key. The most important food for them is snails that are about the size of their eyes. The shells of these snails will wear down their beak-like teeth, which would grow so long that they would no longer be able to eat. The largest part of their diet is crustaceans. They are pure carnivores, and love meaty foods.

Green spotted puffers are wonderful pets, and are highly rewarding. They are some of the most intelligent fish readily available, and have magnificent personalities that are more like dogs than fish. With proper care and attention, these fish can give their owner 10 or more years of great companionship.



### Green Spotted Puffer Profile and Care Information

**Scientific Name :** Tetraodon nigroviridis

**Common Names :** *Green Spotted Puffer, GSP*

**Care Level :** Moderate

**Size :** 6" (15 cm)

**pH :** 7.5 - 8.2

**Temperature :** 78 - 82 °F (25 - 28 °C)

**Specific Gravity :** adaptable, from low-end brackish (1.005) up to low-end saltwater (1.20)

**Lifespan :** to 10 years, sometimes as much as 15

**Origin / Habitat :** brackish rivers and estuaries of Borneo and Sumatra

**Temperament / Behavior** : aggressive fin-nippers

**Breeding / Mating / Reproduction** : practically non-existent in captivity

**Tank Size** : Minimum of 30 gallons (113.5 L)

**Compatible Tank Mates** : Must be chosen with caution. Most will just be eaten. Some possible companions are: mollies, scats, monos, archerfish, bumblebee gobies, and other green spotted puffers.

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment - Be sure to quarantine, as they are wild caught and often come in with parasites.

**Diet / Fish Food** : When young: snails, brine shrimp, plankton, krill, crickets, cockles, prawns, whitebait, worms, ghost shrimp. When larger (about 4" or so): all the above, and also clams, mussels, squid, scallops, shrimp, crab legs, oysters, lobster, and crayfish.

**Tank Region** : Middle. Very active swimmers.

**Gender** : Even for experts, it is nearly impossible to sex them. Usually the only way is by dissection, or if they happen to lay eggs (an unlikely occurrence).

## References

- <http://www.aquatic-hobbyist.com/profiles/brackish/gsp.html>
- Choosing the Right Fish for Your Aquarium by Jeremy Gay

**Photos Copyright** pinkfloydpuffer

**About the Author:** pinkfloydpuffer

**Fish Lore Forum** : Puffer Forum

## BUTTERFLYFISH

### AFRICAN BUTTERFLY FISH (PANTODON BUCHHOLZI)

The African Butterfly fish is a really odd looking fish and can make an interesting addition to the right tank. When viewed from above the African Butterfly fish's pectoral fins resemble butterfly wings. They come from slow flowing rivers in Africa so it would be good to put them in a tank with slower water movement. African Butterfly Fish seem to float much of the time, so if you're looking for a really active fish this may not be the one for you. They are predatory and will eat smaller surface dwelling fish.

These African Butterfly Fish are notorious tank jumpers so a good hood with no escape points is needed.

It's always a good idea to keep any new fish in a Quarantine Tank for a few weeks for monitoring before introducing them into your main tank. The African Butterfly can be sensitive to fluctuations in aquarium pH and temperature. You may also want to take a little longer when acclimating your fish to the tank water. Take an hour (instead of 15 minutes) and slowly add small amounts of tank water to the bag every 10 minutes or so.

African Butterfly fish will accept smaller fish food including flakes, frozen, freeze dried and live foods (crickets and worms). They may also eat smaller top dwelling fish.

#### African Butterfly Fish Profile Facts and Care Information

##### Picture



**Scientific Name :** *Pantodon buchholzi*

**Common Names :** African Butterfly Fish, Freshwater Butterfly

**African Butterfly Fish Care Level :** Easy to Moderate

**Potential Adult Size :** Up to 4 inches (10 cm)

**Tank Conditions** : pH: 6 - 7.5, Temperature: 75°F - 82°F (24°C - 28°C)

**African Butterfly Fish Lifespan** : 5 years or longer

**Origin / Habitat** : Africa

**Temperament / Behavior** : May try to eat smaller fish that feed on the surface and smaller fish that hang near the surface, such as hatchet fish.

**African Butterfly Fish Breeding / Mating / Reproduction** : They have been bred in captivity and are egg layers. Eggs will float to the surface and may get eaten by parents and other fish.

**Tank Size** : 20 gallon minimum

**Compatible Tank Mates** : They can be relatively peaceful if kept with similar sized and larger tank mates. Avoid keeping them with smaller top dwelling fish.

**Disease** : Freshwater Fish Disease

**Diet / Fish Food** : An omnivore - provide a varied diet with live food, frozen food and they should accept flake food. They really enjoy small insects such as crickets.

**Tank Region** : Top

**Gender** : Difficult to determine

**Author** : Mike FishLore

**Fish Lore Forum** : African Butterfly Fish Forum

### BANDIT CORYDORAS - CORYDORAS METAETAE

The bandit cory is one of the many varieties of Corydoras species. The bandit cory is of the regular size for the cories, which is about 2 inches. They also have relatively the same preferences for water parameters. These little fish like neutral water, 6.5-7.5 for the pH, the water being soft and the temperature being about 71.6 - 75.2°F (22-24°C). They come from the rivers of Columbia. So they prefer a well planted tank that has lots of hiding places. Their home should be at least 10 gallons for a school of just 3 cories. These fish, if cared for properly, will live to around 3 to 5 years.

Since the bandit cory is a social little fish, they like to be in a school of at least 3 of the same species. If you want to have multiple cories in the tank, then try and have at least 3 of each species. Most species prefer the company of their own species, but if they have none of their own species, they will school with other species. These fish have such a peaceful nature, the *C. metae* can be put with many different fish, except larger cichlids, and any other fish that are big enough to eat the cory.

*C. metae* are omnivorous little fish, so they eat any and all excess food that the main tank fish miss and don't even notice. But they should be supplemented with algae wafers and sinking shrimp pellets.

These bandit corydoras are hard to spawn in the home aquarium, but if you are able to spawn them, it is very rewarding, because these fish usually go for about \$6 to \$8 a piece in the local stores, and some stores have them at an even higher price.

These bandit corydoras catfish can be easily mistaken with the *C. oiapoquensis*. But if you know the differences, then you are doing great.



## Bandit Cory Profile and Care Information

**Scientific Name** : *Corydoras metae*

**Common Names** : *Bandit Cory*

**Care Level** : Easy

**Size** : 2 inches (5cm)

**pH** : 6.5 - 7.5

**Temperature** : 72°F - 75°F (22°C - 24°C)

**Water Hardness** : Soft

**Lifespan** : 3 - 5 years

**Origin / Habitat** : Columbia, South America

**Temperament / Behavior** : Peaceful and likes to be in groups

**Breeding / Mating / Reproduction** : Breeding the bandit cory can be difficult in the home aquarium.

**Tank Size** : 10 gallon or larger.

**Compatible Tank Mates** : Anything that will not eat them or harass them too much.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Bottom feeder, they scavenge the food off the bottom of the tank. Supplement their diet with algae wafers and sinking shrimp pellets fed at night.

**Tank Region** : Lower-bottom of the tank with the odd time of spawning surfaces being along the glass of the tank.

**Gender** : Females are larger and rounder than the males of the same age.

**Gallery Photos** : [Corydoras Photos](#)



**Similar Species :** Catfish, very similar to *C. oiapoquensis*

### References

- [http://www.planetcatfish.com/catelog/species.php?species\\_id=24](http://www.planetcatfish.com/catelog/species.php?species_id=24)
- Corydoras Catfish
- Aquarium Atlas #1 by Dr. Rudiger Riehl and Hans A. Baensch

**Fish Lore Forum :** Corydoras Posts

## BRISTLENOSE PLECO - ANCISTRUS SPP



The Bristlenose Pleco (*Ancistrus* spp) is a much better option over the common pleco for hobbyists because they only get to about 6 inches in size, sometimes smaller depending on the species (there are lots of species in the *Ancistrus* genus). These bristlenose plecos can be very expensive for a freshwater fish with prices ranging from \$10 to \$50. There are albino varieties as well.

Give these plecos fresh veggies from time to time. They will go after zucchini and cucumbers. Check the forum for more ideas on feeding and breeding them.

### Bristlenose Pleco Profile Facts and Aquarium Care Information

**Scientific Name :** *Ancistrus* spp

**Common Names :** *Bristlenose Pleco, Bushy Nose Pleco*

**Care Level :** Easy

**Size :** generally up to 6 inches (15 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 68°F - 77°F (20°C - 25°C) | Water Hardness : 2° to 20° dH

**Lifespan :** 3 to 4 years

**Origin / Habitat :** South America, Amazon River basin and tributaries

**Temperament / Behavior :** Peaceful but may be territorial with conspecifics

**Bristlenose Pleco Breeding / Mating / Reproduction :** Check the forum for spawning/breeding info. Lots of posts on breeding these plecos.

**Tank Size :** 30 gallons (115 liters)

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Eats algae and will appreciate fresh veggies like cucumber and zucchini. Sinking algae wafers are good to use too.

**Tank Region :** All over

**Gender :** Males may have more and longer bristles near the mouth than females.

**Author :** Mike FishLore

**Photo Credit :** sannse (wikimedia)

## BRONZE CORYDORAS - CORYDORAS AENEUS



The Bronze Corydoras (*Corydoras aeneus*) also goes by the common name of Bronze Catfish. They are originally from South America and are frequently found in quiet shallow waters with soft substrates. They are also found in large groups of 20 to 30 fish so they are a schooling fish that will appreciate being kept in groups of at least 6 or more in the aquarium. These corydoras are scavengers mostly and will get any of the left over foods that are missed by the middle and top dwelling fish in the tank. They need to be target fed though to make sure they are getting enough to eat. A good quality micro pellet type food or flake food can form the primary part of their diet.

### Bronze Corydoras Profile Facts and Aquarium Care Information

**Scientific Name :** *Corydoras aeneus*

**Common Names :** *Bronze Corydoras, Bronze Catfish*

**Care Level :** Easy

**Size :** to 3 inches (7.5 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 73°F - 79°F (25°C - 28°C) | Water Hardness : 5° to 20° dH

**Lifespan :** 3 to 4 years

**Origin / Habitat :** South America, Colombia and Trinidad

**Temperament / Behavior :** Peaceful

**Breeding / Mating / Reproduction** : Sub stratum egg-scatterers, non guarders. Females will place eggs near submerged rocks or plants. Eggs hatch after 5 days.

**Tank Size** : 30 gallons (115 liters)

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Scavengers - in the wild they eat small insects, worms, crustaceans and plant matter. Use a good sinking pellet food and they will also eat left over flakes, algae wafers, shrimp pellets, etc.

**Tank Region** : Bottom of the aquarium.

**Gender** : Females will be thicker/wider than males of the same age.

**Similar Species** : Catfish - Corydoras | Dwarf Corydoras | Julii Corydoras | Panda Corydoras | Salt and Pepper Cory (Corydoras habrosus) | Sterbai Corydoras | Corydoras trilineatus

**Author** : Mike FishLore

**Photo Credit** : Quatermass (wiki)

## BUMBLEBEE CATFISH - MICROGLANIS IHERINGI

The bumblebee catfish is a quite vibrant colored fish and very amusing to watch when it comes out of its hiding hole to scavenge for food. Normally the bumblebee catfish is nocturnal and will only come out at night, but if it becomes aware of food being present during the daytime, it will come out and feed during the middle of the day and bury its head in the substrate just to get the few bits of food there are laying around the tank.

There are 2 types of bumblebee catfish, the South American and the Asian. The South American can be identified by the spot at the base of the caudal fin. This spot is almost like a square in the South American and a triangle with the tip towards the head for the Asian.

The South American bumblebee catfish (*Microglanis iheringi*), is quite easy to take care of because the water it requires is close to any basic water that city offers, with the water being soft, with a pH of 6.5-7.5 and the temperature at 21-25°C (70-77°F). It grows to a max of about 2" (5cm) but I have had some that grow to about 3" (8cm). They can live for about 3-5 years in ideal conditions.

Since the bumblebee catfish has such a wide mouth, it can swallow big food items like sinking pellets, frozen foods, freeze dried foods, whole, as well as small slender fish, like some tetras. Because it has such a wide mouth, it should be kept with fish that are too big to fit in its mouth and with fish that are small enough that it won't fit in the other fish's mouth.

It will hide in the lower regions of the tank, or where there is the most hiding spots. The roots of plants, in cracks and holes of driftwood and rocks, in ornaments, wherever it can fit and still get out of later.

The size of tank for 1 catfish is 20 gallons, and with each additional catfish, it should be at least 10 gallons with lots of hiding spots.

There have been no recorded accounts of this fish spawning in captivity yet. The sex of this fish is unknown.



## Bumblebee Catfish Profile and Care Information

**Scientific name:** *Microglanis iheringi*

**Common name:** South American Bumblebee catfish

**Care level:** Easy

**Size:** 2" (5cm)

**pH:** 6.5-7.5

**Temp:** 21-25°C (70-77°F)

**Water Hardness:** Soft

**Origin/Habitat:** Venezuela and Columbia, South America

**Lifespan:** 3-5 years

**Temperament/Behavior:** Quiet, peaceful, nocturnal, but will eat small slender fish during the night when it is feeding time.

**Breeding:** No recorded accounts in captivity as of yet

**Compatible Tank mates:** Any fish that is just big enough not to get eaten and just small enough that it won't eat the bumblebee catfish.

**Fish disease:**

**Food:** Omnivorous, but prefers sinking tablets, frozen foods, freeze dried foods, or even small sinking granules. The fish will come out of hiding during the daytime if there is food present.

**Tank region:** Lower, with lots of hiding spots from plant roots, Anubias sp. are great for this, crakes and holes in driftwood and rocks.

**Gender:** Unknown

**Tank size:** Min. of 20 gallons for 1, an additional 10 gallons for each additional fish

**Credits:** Baensch Aquarium Atlas book 2



## CHINESE ALGAE EATER - GYRINOCHEILOS AYMONIERI

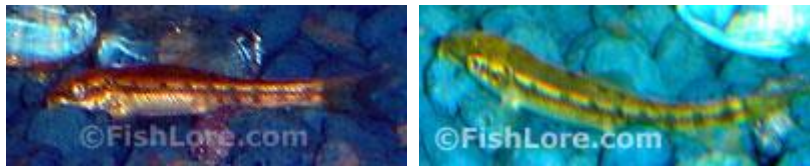
The Chinese algae eater is commonly offered for sale in local pet shops but is probably not the best choice for most tanks. As juveniles Chinese Algae Eaters perform their job of eating algae with gusto but as they mature they may eat algae less and become very territorial. As they mature they may also start to affix themselves to the sides of larger flat bodied tank mates (such as Angelfish) and they will damage the scales of their victims.

The Chinese algae eater can sometimes jump out of tanks so you will need a good hood with no escape points.

Just like other tropical fish, place your fish in a quarantine tank for a few weeks for monitoring before introducing them into your main tank.

As juveniles they should eat the algae growing on the walls and objects in your tank but it has been reported that they will eat algae less when they mature. Avoid placing them in newly setup tanks lacking algae for them to graze on. Algae wafers can be used to supplement their diet.

### Algae Eater Picture



### Chinese Algae Eater Profile Facts and Care Information

**Scientific Name :** *Gyrinocheilos aymonieri*

**Common Names :** *Chinese Algae Eater, Indian Algae Eater, Sucker Loach, Sucker Fish, Golden Algae Eater*

**Chinese Algae Eater Care Level :** Easy to Medium

**Size :** Up to 11 inches (28 cm)

**pH :** 6.5 - 7.5

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 8° to 12° dH

**Lifespan :** 5 - 10 years

**Origin / Habitat :** Asia

**Temperament / Behavior :** As a juvenile it should be ok in a community tank but as it matures it can become a pest and should be removed from community tanks. It's probably best not to get them for community tanks in the first place. There are better algae eaters available for community tank setups.

**Chinese Algae Eater Breeding / Mating / Reproduction :** Difficult to breed in the home aquarium.

**Tank Size :** 55 gallon (208 liters) or larger.

**Compatible Tank Mates :** As adults, they may attach to the sides of larger flat bodied fish such as Angelfish and damage scales.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Mostly algae but reported to eat algae less as it matures. Supplement with algae wafers.

**Tank Region :** Mostly on the bottom and sometimes on the tank walls and plant leaves.

**Gender :** Very difficult to determine difference between male and female.

**Author :** Mike FishLore

**Fish Lore Forum :** Chinese Algae Eater Forum

## COLUMBIAN SHARK - HEXANEMATICHTHYS SEEMANNI

The Columbian Shark seems to be one of those fish that are always at the pet stores, often incorrectly identified and/or with misleading or incorrect information. For the majority of home hobbyists (95 percent or more of us) the Columbian Shark is not a good fish to keep. Let me explain why...

They usually get lumped in with the freshwater fish species but this fish is not purely a freshwater fish. It is actually a brackish water species as juveniles that will slowly need to be acclimated to a full saltwater tank as they get bigger. The potential adult size of this fish is also often misrepresented. They can reach 20 inches (51 cm) or more in size if taken care of properly.

The other thing to keep in mind with the Columbian cats is that they are predators and will eat smaller tank mates once they get big enough. In fact, some hobbyists will feed them small feeder guppies as an occasional treat.

The Columbian Shark can be fairly active and will need lots of swimming room. Couple their activity levels with their potential adult size and you can start to realize that you will need a pretty big tank to keep these guys happy and healthy.

They should accept most fish foods including flakes, frozen, freeze dried and live foods. Drop in some sinking shrimp pellets or catfish pellets when the lights are turned off and let them scavenge around for them.

Columbian Sharks also have venomous dorsal spines, so be very careful when performing your tank maintenance. It's probably a really good idea to get some of those long rubber aquarium gloves.

### Picture



Columbian Shark Profile Facts and Care Information

**Scientific Name :** Hexanematichthys seemanni

**Common Names :** A very long list of common names: *Silver Tipped Shark, Tete Sea Catfish, White Tip Shark Catfish, Black Fin Shark, Christian Catfish, Jordan's Catfish, West American Cat Shark*

**Columbian Shark Care Level :** Moderate, needs a very large tank as adults

**Size :** Anywhere from 10 - 20 inches (25-51 cm) and sometimes even larger!

**pH :** 7 - 8

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 5° to 20° dH

**Specific Gravity :** 1.005 - 1.010, saltwater as adults (1.020 - 1.025)

**Lifespan :** 10 - 15 years or longer

**Origin / Habitat :** Wild caught specimens originate from Central America, Guatemala, South America and Southern Mexico. They are often found in coastal waters and brackish rivers.

**Temperament / Behavior :** Mostly peaceful but may eat smaller fish as it grows larger. Avoid keeping them with small fish such as neon tetras and guppies.

**Columbian Shark Breeding / Mating / Reproduction :** Very difficult, not sure if it has been accomplished in an aquarium. Males are mouth brooders.

**Tank Size :** 75 gallon (284 liters) minimum for one, much larger for multiples. This fish needs a large tank not only for it's size, but because it is a fairly active swimmer.

**Compatible Tank Mates :** Fish that tolerate brackish water conditions. Scats, Monos, Targetfish. When this freshwater/brackish shark gets big enough, it will start to eat much smaller tank mates.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Being catfish, they are primarily scavengers. They will constantly be looking for bits and pieces on the bottom of the tank. Give them sinking shrimp pellets, catfish pellets, prepared sinking foods and supplement with live or frozen foods such as blood worms.

**Tank Region :** Sometimes middle areas, but mostly on the bottom.

**Gender** : Hard to determine by external features.

**Author** : Mike FishLore

**Fish Lore Forum** : Columbian Shark Forum

## CORYDORAS CATFISH, CORY CAT - CORYDORAS SPP.

The Corydoras Catfish, or Cory Cat, is an excellent addition to most community tanks because of their peaceful nature. Bottom dwellers, they are content to constantly rummage around the bottom of the tank looking for scraps. This is a very cute and endearing catfish with many different species.

They prefer to be in schools of 6 or more but many keep one or two corydoras in their smaller tanks.

Cory cats enjoy feeding on tropical fish food that will sink to the bottom such as algae wafers or shrimp pellets.

### Corydoras Pictures



### Corydoras Catfish, Cory Cat Profile Facts and Care Information

**Scientific Name :** Corydoras spp.

**Common Names :** *Albino Corydoras, Armored Catfish, Plated Catfish, Bronze Catfish, Mailed Catfish, Cory Catfish*

**Care Level :** Easy

**Size :** 2.5 inches (6 cm)

**pH** : 6 - 8

**Temperature** : 72°F - 78°F (22°C - 26°C)

**Water Hardness** : 5° to 18° dH,

**Lifespan** : 3 - 5 years

**Origin / Habitat** : South America

**Corydoras Temperament / Behavior** : Very peaceful.

**Corydoras Breeding / Mating / Reproduction** : Breeding them can be difficult in the home aquarium.

**Tank Size** : 10 gallon or larger.

**Corydoras Compatible Tank Mates** : Many, due to their peaceful nature.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Corydoras Diet / Fish Food** : Bottom feeder, they will scavenge around the tank looking for scraps. Supplement their diet with Algae Wafers that sink to the bottom of the tank.

**Tank Region** : Bottom

**Gender** : Females are larger and rounder than the males of the same age.

**Fish Lore Forum** : [Corydoras Forum](#)

**Author** : [Mike FishLore](#)

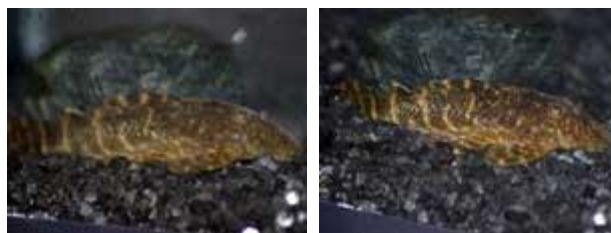
## CLOWN PLECO - PANAQUE MACCUS

The clown pleco, or Panaque maccus, is a pleco that many people say is useless because it only eats on driftwood, by many people say that it is a great algae eater, which it is. The Clown Pleco is one of the many dwarf pleco species which only gets to 3.5 to 4 inches (8.75 - 10cm) and is able to live happily in a wide range of water parameters, even the wild ones are very durable. They come from soft, neutral waters in the rivers of Venezuela and Columbia.

Towards many fish they are very peaceful and will stay on the bottom or sides of the tank, but if there is more than one male, or even more than one female, the dominant fish will drive the intruder outside of the dominant fishes territory. They will be suitable for almost all fish tanks, except for African cichlid tanks, or any fish tank that has fish big enough to eat the clown pleco.

These clown plecosp are very difficult to breed, they require lots of work to have them spawn, and then to raise the fry is a task on its own. There is a certain week in the spring that you will have to drain the water in the tank to about 30-50 percent, then refill with pure rain water (or RO water), it has to be filtered really well if you live in the city, you will have to do that a few times in that week for them to trigger something to spawn, which can be a hassle unless you have lots of time on your hands. To tell the males from females it is very difficult, but the males usually have some more 'whiskers' around the mouth and face region.

The minimum tank size for a clown pleco is 20 gallons, and for each additional clown pleco, try to have an extra 10 gallons just so there is enough room for each fish to have its own territory. They will hang out on the side of the tank but mostly the bottom of the tank, where algae, and primarily driftwood is located. The primary diet is driftwood, but they need to supplement their diet with vegetation, so adding algae wafers, and fresh veggies like cucumber, lettuce, etc.



### Clown Pleco Profile and Care Information

**Scientific Name :** Panaque maccus

**Common Names :** *Clown Pleco*



**Care Level :** Moderate

**Size :** 3.5 - 4 inches (8.75 - 10cm)

**pH :** 6.8 to 7.6

**Temperature :** 73-82°F (23-28°C)

**Lifespan :** approximately 10 years, can live longer

**Origin / Habitat :** Venezuela and Columbia

**Temperament / Behavior :** Peaceful towards other species, males are territorial towards other males

**Breeding / Mating / Reproduction :** Very difficult to breed the clown pleco in the home aquarium

**Tank Size :** Minimum of 20 gallons

**Compatible Tank Mates :** It is very compatible with lots of fish, just not those that will eat it.

**Fish Disease :** [Freshwater Fish Disease](#)

**Diet / Fish Food :** Mainly a wood eater, but the clown pleco will eat many other things as well like yams, cucumbers.

**Tank Region :** Mainly the bottom or side of the tank

**Gender :** It is very hard to determine the gender

**Similar Species :** Any other dwarf pleco species - see more [Catfish](#)

**Profile and Photos by :** [Tom](#)

## LEOPARD CATFISH - CORYDORAS TRILINEATUS



The Leopard Catfish (*Corydoras trilineatus*) is frequently confused with the *Corydoras julii*. You can tell them apart by looking at the horizontal stripes. In the *C. trilineatus* they are larger. There are very similar aquarium care requirements between the two species.

### Leopard Catfish Profile Facts and Aquarium Care Information

**Scientific Name :** *Corydoras trilineatus*

**Common Names :** *Leopard Catfish, Three Line Corydoras, Three Stripe Corydoras*

**Care Level :** Easy

**Size :** Up to 2.3 inches (6 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 72°F - 79°F (22°C - 26°C) | Water Hardness : 2° to 25° dH

**Lifespan :** 2 to 3 years

**Origin / Habitat :** South America: Central Amazon River basin

**Temperament / Behavior :** Peaceful small schooling catfish

**Leopard Catfish Breeding / Mating / Reproduction :** The female holds eggs between her pelvic fins, where the male fertilizes them. Female then swims to a suitable spot where she attaches the sticky eggs. The pair repeats this process until about 100 eggs have been fertilized and attached (ref: fishbase)

**Tank Size** : 20 gallons (75 liters), keep them in schools

**Compatible Tank Mates** : Similar sized fish, peaceful species.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : They feed on small crustaceans, worms and plant matter in the wild. They will eat smaller flakes, micro pellets (new life spectrum micro pellets are really good)

**Tank Region** : bottom region, among the plants and in caves

**Gender** : When looking at them top-down, females will be thicker or wider.

**Photo Credit** : Soulkeeper (wiki)

**Author** : Mike FishLore

## DWARF CORYDORAS - CORYDORAS HASTATUS



The Dwarf Corydoras (*Corydoras hastatus*) also goes by the common names of Dwarf Catfish and the Pygmy Cory. There are three species of dwarf corydoras - *C. habrosus*, *C. hastatus* and *C. pygmeus*. *Corydoras hastatus* gets to about an inch in size and can be kept in a small school in a 10 gallon or larger aquarium. They will appreciate a well planted tank and cruise among the plant leaves.

They will accept smaller flake and micro pellet type fish foods.

### Dwarf Corydoras Profile Facts and Aquarium Care Information

**Scientific Name :** *Corydoras hastatus*

**Common Names :** *Dwarf Corydoras, Dwarf catfish, Micro Catfish, Pygmy Cory, Pygmy Corydoras*

**Care Level :** Easy

**Size :** Up to 1 inches (2.4 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 77°F - 82°F (25°C - 28°C) | Water Hardness : 5° to 20° dH

**Lifespan :** 3 to 4 years

**Origin / Habitat :** South America: Amazon and Paraguay River basins, found in ponds

**Temperament / Behavior :** Peaceful small schooling fish

**Dwarf Corydoras Breeding / Mating / Reproduction** : Non guarder, female attaches eggs to plants or tank walls. Spawning can take place over a couple day period. Eggs hatch in 3 to 9 days.

**Tank Size** : 10 gallons (38 liters), keep them in schools

**Compatible Tank Mates** : Similar sized fish, peaceful species.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : They feed on small crustaceans, worms and plant matter in the wild. They will accept sinking algae wafers, shrimp pellets, a good flake food or micro pellet food.

**Tank Region** : Middle regions, among the plants

**Gender** : When looking at them from the top of the tank, females will be thicker, wider.

**Photo Credit** : AquariaNR (wikimedia)

**Author** : Mike FishLore

## GLASS CATFISH - KRYPTOPTERUS MINOR

Without a doubt, the Glass Catfish is an oddball fish that will catch the eye of anyone looking into an aquarium containing it. There are many types of Glass Catfish and the two types that are most easily confused are Kryptopterus Minor and Kryptopterus Bichirris. The main difference between the two is their size; K. Minor is 2.5 inches while K. Bichirris can reach a size of 6.5 inches. K. Minor is a very beautiful catfish with an absent dorsal fin and lack of body pigmentation.

The first thing to notice about the Glass catfish is that it has transparent flesh, which allows us to see the spinal cord and internal organs. This transparent fish is also a picky eater; it has been known not to accept flake foods with ease. It is better to look for a local fish store that has trained their Glass Cats to eat flakes and freeze dried foods. To keep them in optimum shape, every once in a while they should get a treat of live or frozen brine shrimp or daphnia. Another trick to make flake and freeze dried food more attractive to the Glass Cat, is to place the food near a current, to stimulate feeding response.

The Glass Catfish is a very delicate fish; it is very sensitive of fluctuating water parameters, and should be placed in a fully cycled aquarium with low nitrates. The Glass Cat is a very peaceful, timid and delicate fish. It should be kept only with peaceful tank mates, and a school of at least 6. They do best in larger, planted tanks with plenty of hiding spots. If they are kept with aggressive mates or are kept in a small school they will become white in color and die of stress.



### Glass Catfish Profile and Care Information

**Scientific Name :** Kryptopterus Minor

**Common Names :** *Glass Catfish, Ghost Catfish, Glass Cat*

**Care Level :** Moderate

**Size :** 2.5 - 3" (8 cm)

**pH :** 6 - 7

**Temperature :** 70 to 79°F (21 - 26°C)

**Lifespan :** 7-8 years

**Origin / Habitat :** Asia, Borneo

**Temperament / Behavior :** Peaceful, Timid. It should be kept in a school of at least 6. Will not bother tank mates and should be kept with other peaceful fish.

**Breeding / Mating / Reproduction :** Extremely difficult to spawn in the home aquarium. Very little records exist about the breeding of this fish in captivity.

**Tank Size :** 30 Gallons minimum

**Compatible Tank Mates :** Best kept with other peaceful tank mates and does better when kept in schools of 6 or more.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment - Be sure to quarantine, as they are wild caught and often come in with parasites.

**Diet / Fish Food :** It can be slightly difficult to get them eating flakes and freeze dried foods. Supplement with live or frozen mysis, brine shrimp and daphnia.

**Tank Region :** Middle of tank, areas of water current

**Gender :** Sexing is unknown

**Photo Copyright** auvre personnelle - pehem

## GOLD NUGGET PLECO - BARYANCISTRUS SP.



The Gold Nugget Pleco (*Baryancistrus* sp.) has a few different varieties available. These plecos still often go by "L" numbers even though they were scientifically classified in 2011. The L stands for Loricariidae and the number is the fish. There are three different Gold Nugget Plecos - L018 (and L085), L081 and L177. The one pictured is *Baryancistrus xanthellus*. They are considered omnivores but mainly eat algae on rocks and driftwood. There are sinking algae wafers and pleco type foods available online or at your local fish store that you can feed them. They may also go after fresh veggies like zucchini and cucumbers.

If you want to buy one of these Gold Nugget Plecos expect to pay quite a bit. You can find them online going for anywhere from \$30 to \$70 or more.

### Gold Nugget Pleco Profile Facts and Aquarium Care Information

**Scientific Name :** *Baryancistrus* sp.

**Common Names :** *Gold Nugget Pleco*

**Size :** 6 to 9 inches (22 cm)

**Water Parameters :** pH 6.6 - 7.5 | Temperature : 71°F - 79°F (22°C - 26°C) | Water Hardness : 5° to 15° dH

**Lifespan :** 5 years plus

**Origin / Habitat :** South America, Amazon River tributaries in Brazil and Venezuela



**Temperament / Behavior** : They can be territorial with other plecos

**Panaque Catfish Breeding / Mating / Reproduction** : No info on breeding.

**Tank Size** : 55 gallons (210 liters) or larger given their adult size.

**Compatible Tank Mates** : Will do ok with most other species except for other plecos.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : These plecos are considered omnivores and will appreciate a variety of foods like sinking algae wafers, sinking shrimp pellets, algae growing on rocks, etc.

**Tank Region** : Bottom

**Gender** : Very difficult using external features

**Photo Credit** : Anne Blindheim

**Author** : Mike FishLore

**References** : Fishbase - Loricariidae (Armored catfishes) - Ancistrinae - Baryancistrus sp.

## IRIDESCENT SHARK CATFISH, PANGASIUS CATFISH

The Iridescent Shark is also known as the Pangasius Catfish, the Sutchi Catfish and the Striped Catfish. There is also an albino iridescent shark. As you may have guessed from some of the other common names, this really isn't a shark, it's a catfish. They originate from Asia and this is one of the species that is completely unsuitable for most hobbyists in our opinion. This fish can grow to be almost 4 feet in length (120 cm) and sometimes larger in the wild. They are very active swimmers as well. Who out there has the tank big enough to adequately keep this monster?

The Iridescent Shark is quite skittish and can be easily frightened by sudden movements in front of the tank. Their nervous behaviors can lead to damage of themselves and for their tank mates. Keeping them in a school of 5 or more may help calm them down. Floating plants may help make them feel secure too. They have been known to jump from tanks, so a good tight fitting hood is a necessity for this fish.

They are omnivorous and should go after all fish food that you place in the aquarium. Some feel that the iridescent shark should be given more carnivorous type rations as juveniles and to mix more greens into their diet as the get bigger. Aim for a varied diet of flake foods, frozen foods, algae wafers and catfish pellets.

Seriously, this is a tank buster. They are very active swimmers, may eat smaller fish and will outgrow most tanks. If you've already purchased this fish and it is in a smaller tank, please consider returning it to the pet store and getting something smaller.

### Iridescent Shark Picture



Photo Credit: Roxann

### Iridescent Shark Catfish, Pangasius Catfish Profile Facts and Care Information

**Scientific Name :** Pangasius hypophthalmus

**Common Names :** *Iridescent Shark, Pangasius Catfish, Sutchi Catfish, Striped Catfish, Thailand Catfish*

**Care Level :** Moderate, needs a huge tank

**Size :** 47 inches (120 cm) - almost 4 feet in total length!

**pH :** 6.5 - 7.5

**Temperature :** 72°F - 79°F (22°C - 26°C)

**Water Hardness :** 2° to 20° dH,

**Life span :** 10 years, maybe much longer

**Origin / Habitat :** Asia, Thailand

**Iridescent Shark Temperament / Behavior :** Can be quite skittish, nervous and may not bother tank mates as juveniles. May eat smaller fish as it starts to reach adult size.

**Breeding / Mating / Reproduction :** Not common in the home aquarium. Breeding has taken place at aquaculture farms and ponds.

**Tank Size :** 300 gallon, preferably much larger

**Iridescent Shark Compatible Tank Mates :** Not many, similar sized species perhaps.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Omnivorous, meaning that the Iridescent Shark should go after whatever you place in the tank. Give them a well balanced healthy diet consisting of both meaty and green foods. When they are smaller you should give them flakes and occasionally [Algae Wafers](#) that sink to the bottom of the tank. Catfish pellets can be used as they start to grow into adults.

**Tank Region :** All over, mostly middle of the tank though.

**Gender :** Females are larger or more full bodied than males.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Iridescent Shark Forum](#)

## JULII CORYDORAS - CORYDORAS JULII



The Julii Corydoras (*Corydoras julii*) also goes by the common name of Julii Cory and sometimes the Leopard Cory. They are a small species that gets up to 2 inches when fully grown. They like to be kept in groups of 6 or more and will do great in a community type set up with other peaceful species.

### Julii Corydoras Profile Facts and Aquarium Care Information

**Scientific Name :** *Corydoras julii*

**Common Names :** *Julii Corydoras, Leopard Corydoras, Julii Cory*

**Care Level :** Easy

**Size :** to 2 inches (5.2 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 73°F - 79°F (23°C - 26°C) | Water Hardness : 2° to 25° dH

**Lifespan :** 3 to 4 years

**Origin / Habitat :** South America, Amazon River basin

**Temperament / Behavior :** Peaceful

**Julii Cory Breeding / Mating / Reproduction :** Sub stratum egg-scatterers, non guarders.

**Tank Size :** 30 gallons (115 liters)

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Scavengers that eat all sorts of foods. Sinking pellet foods, algae wafers, thawed or live brine, left over foods that sink to the bottom of the tank, etc.

**Tank Region** : All over the bottom of the aquarium.

**Gender** : Females will be thicker/wider looking than males of the same age.

**Photo Credit** : Kai Schreiber

**Author** : Mike FishLore

## OTOCINCLUS CATFISH, OTTO CAT

The Otocinclus Catfish is a great addition to a peaceful planted tank and a small school of them can form a great algae cleanup crew. Otocinclus Catfish like to hang out under and on plant leaves as well as sucking on the tank glass. However, Otocinclus Catfish can be a little reclusive at times and providing places to hide will help make them feel secure. Because they can be quite shy it's a good idea to avoid keeping them with overly aggressive tank mates or other fish large enough to eat them.

Otto cats are primarily herbivores so you will need to supplement the Otocinclus diet with algae wafers if you think they may not be getting enough algae to eat. Some hobbyists have difficulty in keeping them and it may stem from the tank not having enough algae present for grazing, improper acclimation, lack of hiding places, high nitrates and low oxygen levels. Stay on top of your water changes to prevent nitrates from getting out of hand and provide plenty of surface agitation (air stones or power heads) for gas exchange. For even better results, add your new Otocinclus to an established tank that has already completed the aquarium nitrogen cycle.

Ideally, you should quarantine your Otocinclus Catfish before introducing them to your main tank so that you can monitor them for disease and also provide them with optimal water conditions and no competition from other tank mates for fish food. They may be stressed from transport when you buy them from your pet shop and quarantining them will help settle them down.

Also see the [Otocinclus Caresheet](#) on the forum.

### Otocinclus Catfish Picture



### Otocinclus Catfish, Otto Cat Profile Facts and Care Information

**Scientific Name :** *Otocinclus vestitus*

**Common Names :** Otto, Oto Cat, Dwarf Sucking Catfish, Midget Sucker Fish

**Otocinclus Care Level** : Easy but needs to be slowly acclimated and you must keep them in optimum water conditions by performing frequent partial water changes. Only add them to tanks that have completed the aquarium nitrogen cycle.

**Size** : Up to 2 inches (5 cm)

**pH** : 6 - 7.5

**Temperature** : 70°F - 78°F (21°C - 26°C)

**Water Hardness** : 6° to 15° dH

**Lifespan** : 3 - 5 years

**Origin / Habitat** : South America

**Otocinclus Catfish Temperament / Behavior** : This is a very peaceful catfish and does well when kept in small schools.

**Otocinclus Catfish Breeding / Mating / Reproduction** : They can be difficult to breed in the home aquarium. They will lay eggs on plant leaves.

**Tank Size** : 20 gallon or larger.

**Otocinclus Catfish Compatible Tank Mates** : Many, given their peaceful nature. Avoid keeping with fish large enough to eat them and fish that are overly aggressive.

**Otocinclus Disease** : Freshwater Fish Disease - Quarantine all new fish before adding them to your aquarium!

**Diet / Fish Food** : Herbivores, you may need to supplement their diet with algae wafers.

**Tank Region** : Mostly middle to top.

**Gender** : The male is usually smaller than a female of the same age.

**Fish Lore Forum** : Otocinclus Catfish Forum

**Author** : Mike FishLore

## PANDA CORYDORAS - CORYDORAS PANDA



The Panda Corydoras (*Corydoras panda*) gets its common name from the dark patches over its eyes. There is also a dark spot near the tail fin. These corydoras get to around 1.5 inches in size and do well when kept in schools of 6 or more. Corydoras in general are quite popular in the hobby and make good tank mates for similar sized species. The Panda Cories like slightly cooler water temperatures than most tropicals, doing well in temps around 70 to 72 F.

The panda cory goes for about \$5 online and the long-fin variety is sold for \$10 to \$15.

### Panda Corydoras Profile Facts and Aquarium Care Information

**Scientific Name :** *Corydoras panda*

**Common Names :** *Panda Corydoras, Panda catfish, Panda Cory Cat*

**Care Level :** Easy

**Size :** Up to 1.5 inches (3.8 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 68°F - 77°F (20°C - 25°C) | Water Hardness : 2° to 20° dH

**Lifespan :** 3 to 4 years

**Origin / Habitat :** South America, northern Amazon River basin.

**Temperament / Behavior :** Very peaceful little fish



**Panda Corydoras Breeding / Mating / Reproduction** : Likes to deposit eggs near fine leaved plants like java moss with eggs hatching within 3 or 4 days depending on tank temperature.

**Tank Size** : 30 gallons (115 liters), keep them in small schools

**Compatible Tank Mates** : Similar sized fish with similar water requirements.

**Fish Disease** : [Freshwater Fish Disease](#)

**Diet / Fish Food** : A good quality sinking pellet type food along with additions of thawed or live brine shrimp, worms, etc.

**Tank Region** : Bottom dwellers

**Gender** : Females have wider bodies and may be a bit larger than males.

**Photo Credit** : Calilasseia (wikimedia)

**Author** : [Mike FishLore](#)

## PICTUS CATFISH - PIMELODUS PICTUS



The Pictus Catfish (*Pimelodus pictus*) is a very active catfish species that gets to around 4 inches (11 cm). Even though they are on the smaller side they still need at least a 55 gallon tank or larger to allow for adequate swimming room. You can keep them with other pictus cats or similar sized fish species. They may eat smaller tetras.

Pictus catfish are not all that picky and should accept flake fish food, catfish pellets or sinking catfish wafers. Give them live brine shrimp or thawed freshwater preparations (cube packs) occasionally. This catfish will bring lots of activity to your tank.

Use care when transferring them due to their very long barbells and sharp spines on the dorsal and pectoral fins.

### Pictus Catfish Profile Facts and Aquarium Care Information

**Scientific Name :** *Pimelodus pictus*

**Common Names :** *Pictus Catfish, Pictus Cat*

**Care Level :** Moderate (needs a huge tank or pond)

**Size :** Up to 4 inches (11 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 71°F - 77°F (22°C - 25°C) | Water Hardness : 5° to 18° dH

**Lifespan :** several years

**Origin / Habitat :** South America, Amazon and Orinoco River basins

**Temperament / Behavior :** They are very active but not all that aggressive and can be kept with similar sized tank mates. May eat smaller tetras.

**Pictus Catfish Breeding / Mating / Reproduction :** No info at this time on breeding.

**Tank Size :** 55 gallons (210 liters) or larger given that they are active swimmers.

**Compatible Tank Mates :** Similar sized fish species with similar water requirements should be fine.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** A good tropical flake food or catfish pellet food, sinking wafers. Add in some live or thawed brine shrimp or blood worms from time to time.

**Tank Region :** Bottom to middle

**Gender :** Females that are the same age as males are larger.

**Photo Credit :** Claire H.

## PLECOSTOMUS, PLECO - HYPOSTOMUS PLECOSTOMUS

The Common Pleco or Plecostomus can be a nice fish for the appropriate tank. It is usually referred to as Pleco because of the superstition that if you spell it fully or correctly your fish will soon die. The common plecostomus is well known as an algae eater and can often be found stuck to the side of your aquarium. Many will get very large with the common variety getting to be almost 18 inches (46 cm) and will outgrow most aquariums.

As your pleco gets older they may eat algae less often and you will need to supplement their diet with algae wafers that sink to the bottom of your tank. Shrimp pellets that drop to the bottom of the tank are another favorite. Drop in the algae wafers or shrimp pellets after you turn off the lights for the day to prevent the other fish in the tank from getting the food before your pleco can get to it.

There are varieties that don't get as large, such as the Bristlenose Plecostomus which reaches about 5 inches in size as adults. Don't make the novice mistake of putting a common pleco in a small aquarium. Look into the smaller pleco species as mentioned. These common plecos need to be in ponds or very large aquariums.



### Plecostomus, Pleco Profile Facts and Care Information

**Scientific Name :** Hypostomus plecostomus

**Common Names :** *Suckerfish, Suckermouth Catfish*

**Care Level :** Easy to moderate

**Size :** Up to 18 inches (46 cm)

**pH :** 6.5 - 7.5

**Temperature** : 73°F - 82°F (23°C - 28°C)

**Water Hardness** : 5° to 19° dH,

**Lifespan** : 10 - 15 years

**Origin / Habitat** : South America

**Temperament / Behavior** : Generally peaceful, but plecos can be aggressive toward others of the same species.

**Breeding / Mating / Reproduction** : It can be very difficult to breed them in a home aquarium.

**Tank Size** : Recommended to keep them in aquariums that are in the hundreds of gallons. Due to their potential adult size this is one of those species better left in the wild or kept in ponds. For the aquarium there are other smaller pleco species that are available. Smaller species include the Bristlenose pleco, the Gold Nugget pleco, Zebra pleco and the Clown pleco (linked in similar species below).

**Compatible Tank Mates** : Many, given the mostly peaceful nature of this fish.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Herbivore, try to supplement their diet with algae wafers

**Tank Region** : Bottom and the sides of the glass.

**Gender** : There are no visible differences between the male and female.

**Author** : [Mike FishLore](#)

**Fish Forum** : [Pleco Forum](#)

## QUEEN ARABESQUE PLECO

*Hypancistrus sp (L260)*

The Queen Arabesque Pleco comes from South America in the rivers Brazil, Para and Rio Tapajos. Because of their beauty, the Queen Arabesque Pleco is the fish keeper's substitute to the much sought after zebra pleco, although they don't look very much like them. The L260's have a black and white squiggly pattern over their entire body. They also have small spots scattered here and there over the body as well as on the dorsal fin. The younger fish tend to have their stripes more spaced out and as they age, the stripes become more, creating a more "fine" striped appearance. Another name they are known by, although less common, is Scribble pleco.

L260's prefer a fast current. Every so often you may see them in the current of the filter output. A power head or two (depending on the tank size) can easily see to that requirement, however they are able to survive without. A pH 6.4 to 7.5, medium to medium-hard water and a temperature of 73 to 82°F (23-28°C) is happily tolerated. The minimum tank size recommended is 20 gallons (75.5L). They are not all that fussy in terms of care. Maintaining correct care in general tank maintenance will go a long way in keeping them healthy and happy. Driftwood is needed for them to rasp on and caves should be made for them to go to when in need of refuge or for spawning.

They grow up to anything between 3.5 to 4 inches in length. Queen arabesque plecos are generally peaceful catfish and should not be kept with the very aggressive bottom dwellers as it may result in them getting left out at feeding time. Aggressive fish such as large cichlids, too are not recommended as tank mates. However males can be territorial in terms of guarding his territory, i.e. his cave, especially against other males of the same species.

These catfish are carnivores and will not live on the food generally fed to most of the other more commonly found catfish, of which, most are herbivores or omnivores. L260's have tiny teeth just behind their lips which they use to rasp off tiny critters they may find, generally on driftwood. They have teeth inside their mouth as well, and will eat most meaty foods like blood worms, brine shrimp, gammarus and occasionally small pieces of shrimp and mussels. Some may even eat cichlid pellets as well as other sinking foods normally given to carnivorous bottom dwellers. An acclimatized Queen Arabesque Pleco may also snack on veggies such as cucumber, lettuce and zucchini.

Males are longer in length than females and have long odontodes around the gills as well as being much brighter in color than the females. The females tend to have a shorter and broader body

and their odontodes are absolutely small. Another factor though not very trustworthy, is that the male has a slight coloration of black and white on the belly while the female's is totally white.

Breeding them in the home aquarium is possible but it is not easily achieved. More than one cave should be produced in an aquarium per pair and a powerhead placed in such a manner that a current runs water along the cave entrances. The water should be heavily oxygenated with a temperature of 82-86°F (27-30°C) and a pH 7.5 - 8. Two females to every male is recommended and slightly larger water changes are recommended to trigger spawning. Spawning takes place in the cave and the eggs may take plus minus a week to hatch. The male will then guard the fry. The fry can be fed newly hatched brine shrimp and some crushed shrimp pellets. They are slow growers.

### Queen Arabesque Pleco Profile and Pleco Care Information

**Temperature:** 73-82°F (23-28°C)

**Water Hardness:** Soft-medium hard

**Origin / Habitat:** Brazil, Para, Rio Tapajos

**Lifespan:**

**Temperament / Behavior:** Peaceful, but don't keep them with aggressive fish like large cichlids.

**Breeding:** There are accounts of these fish breeding in captivity. But it can be difficult in the aquarium. See the article above for more details.

**Gender:** Females are shorter and broader with very small odontodes, while males are longer, brighter and have long odontodes.

**Fish Food:** This fish doesn't fit the pleco standards of eating algae. This pleco is a carnivore. It will eat any meaty foods like blood worms, brine shrimp, and gammarus.

**Tank size:** Minimum of 20 gallons.

**Credits / References:**

On the Web -

[www.planetcatfish.com](http://www.planetcatfish.com)

[www.timstropicals.com](http://www.timstropicals.com)

Fishlore members - Dino, Butterfly



## STRIPED RAPHAEL CATFISH - PLATYDORAS COSTATUS

The Striped Raphael Catfish is a medium to large sized catfish that is very active. Being nocturnal, the Striped Raphael Catfish comes out mostly at night, though they are known for getting adjusted to daylight. They are native to the northern amazon rivers, and have not been known for breeding in the home aquarium.

Their tough skin lets the Striped Raphael Catfish tolerate a variety of peaceful, and aggressive fish, including some cichlids. Be careful whenever handling them. They have serrated fins that "pinch" whenever they are stressed. They must be handled with either glass or a plastic cup, because their serrated fins get caught up on the net, making it difficult for them to release themselves after.

They are also known as the "Talking Catfish" because while feeding they make a croaking sound. Whenever holding them, you can feel the vibration of the hum they are creating.



### Striped Raphael Catfish Profile and Raphael Catfish Care Information

**Scientific Name:** Platydoras Costatus

**Common Names:** Striped Raphael Catfish, Talking Catfish Care level: Medium (due to their spiky fins)

**Size:** 6 - 9 inches

**pH:** 6.5 - 7.6

**Temperature:** 75F - 80F

**Temperament:** The Raphael gets along with most fish, do not put him with anything that can fit in it's mouth.

**Lifespan:** Average of 10 years though some have been known for living more than 15 years

**Breeding/Mating/Reproduction:** Difficult to breed in the home aquarium

**Tank Size:** More than 30 gallons, preferably 55 gallons  
**Compatible Tank Mates:** Many due to their peaceful nature, however, do not put him with small fish that may fit into his mouth.

**Catfish Disease:** They have been known for being delicate towards ICH treatments, so dose carefully

**Diet/Fish Food:** Will accept most food such as sinking catfish pellets, blood worms, flakes, etc.

**Tank Region:** They are bottom dwelling and need a few caves and PVC pipes to keep them entertained

**Gender:** Some say the males are not as fat as the females. Females have very round bellies since they are carrying eggs. Another way to tell them apart (for the striped raphael's) is the males tend to be more darker in color. The females are more of a cream color between the stripes, while the males have a yellowish tan color.

**Photo Credit:** Piotr Kuczynski

**Profile Author:** [Tony G.](#)

**References:** - [aqualandpetsplus.com/Catfish,%20Raphael.htm](http://aqualandpetsplus.com/Catfish,%20Raphael.htm)

- [en.wikipedia.org/wiki/Striped\\_Raphael\\_catfish](http://en.wikipedia.org/wiki/Striped_Raphael_catfish)

## REDTAIL CATFISH - PHRACTOCEPHALUS HEMIOLIOPTERUS



The Redtail Catfish (*Phractocephalus hemioliopterus*) can get up to around 50 inches (130 cm) or larger in size when fully grown! The more commonly seen sizes are around half that - 25 inches (65 cm) or so. They are considered fast growers and will outgrow 99 percent of home aquariums so it's best to not buy this catfish unless you have a large backyard pond to put them in. The redtail catfish can live for many, many years so putting one in a small tank that they can quickly outgrow is not a good idea at all.

They are good eaters and it's recommended to feed them a couple of times per week with meaty type freshwater foods or catfish sticks or the larger pellets. They will eat smaller tank mates.

### Redtail Catfish Profile Facts and Care Information

**Scientific Name :** *Phractocephalus hemioliopterus*

**Common Names :** *Redtail Catfish*

**Care Level :** Moderate (needs a huge tank or pond)

**Size :** Up to 53 inches (134 cm)

**Water Parameters :** pH 5.5 - 6.8 | Temperature : 68°F - 82°F (20°C - 28°C) | Water Hardness : 5° to 10° dH

**Lifespan :** many years, decades

**Origin / Habitat :** South America, Amazon and Orinoco River basins

**Temperament / Behavior :** This catfish eat smaller tank mates.

**Redtail Catfish Breeding / Mating / Reproduction :** Bred on commercial farms but not likely in the home aquarium given their adult size.

**Tank Size :** Think large ponds or best left in public aquariums.

**Compatible Tank Mates :** Other large fish species that won't become food for this catfish.

**Fish Disease :** Freshwater Fish Disease - Considered quite hardy

**Diet / Fish Food :** Whatever it wants. It will eat most any foods put into the tank. Feed them every couple of days or so catfish sticks, meaty pieces of fish. They are well known for swallowing smaller aquarium decorations.

**Tank Region :** Bottom to middle

**Gender :** Some think the red colors on the tail fin mark gender differences but to our knowledge there are no known external characteristics to go on.

**Photo Credit:**Monika Betley



The Royal Panaque Catfish (*Panaque nigrolineatus*) is also commonly called the Royal Pleco. They get big, up to about 17 inches (43 cm) and need a larger tank for long term success. This pleco is a wood eating species that will also appreciate vegetables like zucchini, cucumber and peas. They Royal Pleco will do well with most other species but may fight with other pleco species.

#### Panaque Catfish Profile Facts and Aquarium Care Information

**Scientific Name :** *Panaque nigrolineatus*

**Common Names :** *Royal Pleco, Royal Panaque*

**Size :** Up to 17 inches (43 cm)

**Water Parameters :** pH 6.6 - 7.5 | Temperature : 71°F - 79°F (22°C - 26°C) | Water Hardness : 5° to 15° dH

**Lifespan :** 10 years plus

**Origin / Habitat :** South America, Amazon tributaries and Orinoco River basins

**Temperament / Behavior :** They can be somewhat territorial

**Panaque Catfish Breeding / Mating / Reproduction :** No info on breeding yet.

**Tank Size :** 120 gallons (210 liters) or larger given their potential adult size.

**Compatible Tank Mates** : Should do ok with other non-catfish species. May become territorial and aggressive with other catfish species.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : They will eat wood (bog wood) and vegetables (zucchini, cucumber, peas etc.). Sinking algae wafers or pleco targeted pellets.

**Tank Region** : Bottom

**Gender** : Very difficult using external characteristics

**Photo Credit** : Neale Monks

**Author** : Mike FishLore

**References** : Fishbase - Loricariidae (Armored catfishes) - Ancistrinae - Panaque nigrolineatus

## SCHWARTZI CORYDORAS

The Schwartzi cory is one of the many varieties of Corydoras species. It is of the regular size for the cories, which is about 2.5 to 3 inches. The Schwartzi cory also has relatively the same preferences for water parameters. These little fish like neutral water, 6.5 - 7.5 for the pH, the water being soft and the temperature around 71 - 75°F (22-24°C). They come from the rivers of Brazil. So they prefer a well planted tank that has lots of hiding places. Their home should be at least 10 gallons for a school of just 3 cories. These fish, if cared for properly, will live to around 3 to 5 years.

Since these are social little fish, they like to be in a school of at least 3 of the same species. If you want to have multiple cories in the tank, then try and have at least 3 of each species. Most species prefer the company of their own species, but if they have none of their own species, they will school with other species. These fish have such a peaceful nature, the *C. schwartzi* can be put with many different fish, except larger cichlids, and any other fish that are big enough to eat the cory.

These cory cats are hard to spawn in the home aquarium, but if you are able to spawn them, it is very rewarding, because these fish usually go for about \$7 to \$10 a piece in the local stores.



### Schwartzi Cory Species Profile and Care Information

**Scientific Name :** *Corydoras schwartzi*

**Common Names :** *Schwartzi Cory*

**Care Level :** Easy

**Size :** 2.8" (7cm)

**pH** : 6.5 - 7.5

**Temperature** : 72°F - 75°F (22°C - 24°C)

**Water Hardness** : Soft

**Lifespan** : 3 - 5 years

**Origin / Habitat** : Brazil, South America

**Temperament / Behavior** : Peaceful and likes to be in groups

**Breeding / Mating / Reproduction** : Breeding them can be difficult in the home aquarium.

**Tank Size** : 10 gallon or larger.

**Compatible Tank Mates** : Anything that will not eat them or harass them too much.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Bottom feeder, they scavenge the food off the bottom of the tank. Supplement their diet with algae wafers and sinking shrimp pellets fed at night.

**Tank Region** : Lower-bottom of the tank with the odd time of spawning surfaces being along the glass of the tank.

**Gender** : Females are larger and rounder than the males of the same age.

**Gallery Photos** : [Corydoras Photos](#)

## References

- [http://www.planetcatfish.com/catelog/species.php?species\\_id=293](http://www.planetcatfish.com/catelog/species.php?species_id=293)
- [Corydoras Catfish](#)
- Aquarium Atlas #3 by Dr. Rudiger Riehl and Hans A. Baensch
- Photo Credits: [Tom](#)

**Fish Lore Forum** : [Corydoras Posts](#)



## SALT AND PEPPER CORY - CORYDORAS HABROSUS



The Salt and Pepper Cory (*Corydoras habrosus*) is one of the three pygmy corydoras species - *C. habrosus*, *C. hastatus* and *C. pygmaeus*. The salt and pepper cory gets to about .75 inches (2 cm) in size and does well when kept in groups in tanks with lots of plants and softer substrates. They will adapt to a wide range of water parameters but will do well when the tank temperature is kept in the high 70's F. They are scavengers and will eat most aquarium foods that make it to the bottom of the tank. Make sure they are getting enough to eat.

### Salt and Pepper Cory Profile Facts and Aquarium Care Information

**Scientific Name :** *Corydoras habrosus*

**Common Names :** *Salt and Pepper Cory, Salt and Pepper Catfish*

**Care Level :** Easy

**Size :** Up to .75 inches (2 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 77°F - 80°F (25°C - 27°C) | Water Hardness : 2° to 25° dH

**Lifespan :** 2 to 3 years

**Origin / Habitat :** South America: Upper Orinoco River basin

**Temperament / Behavior :** Peaceful small schooling catfish

**Salt and Pepper Cory Breeding / Mating / Reproduction** : Non guarder, brood hider. In captivity, deposits eggs in plants near the substrate, particularly on the underside of the leaves (rarely placed on top). Spawning male protects the female from other males attempting to spawn with her. (ref:fishbase)

**Tank Size** : 10 gallons (38 liters), keep them in schools

**Compatible Tank Mates** : Similar sized fish, peaceful species.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : They feed on small crustaceans, worms and plant matter in the wild. They will eat smaller flakes, micro pellets (new life spectrum micro pellets are really good)

**Tank Region** : bottom region, among the plants and in caves

**Gender** : When looking at them top-down, females will be thicker or wider.

**Photo Credit** : JammingYam (wiki)

**Author** : Mike FishLore

## STERBAI CORYDORAS - CORYDORAS STERBAI



The Sterbai Corydoras (*Corydoras Sterbai*) is also commonly called the Sterbai Cory. It has white spots on a dark body and is a very popular species in the hobby. They do well in tanks with softer substrates like sand or smooth pebbles. Keep them in with similarly size peaceful species and keep them in groups of 5 or more.

### Sterbai Corydoras Profile Facts and Aquarium Care Information

**Scientific Name :** *Corydoras Sterbai*

**Common Names :** *Sterbai Corydoras, Sterbai Cory*

**Care Level :** Easy

**Size :** Up to 2.7 inches (6.8 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 70°F - 77°F (21°C - 25°C) | Water Hardness : 2° to 25° dH

**Lifespan :** 3 to 4 years

**Origin / Habitat :** South America: central Brazil and Bolivia

**Temperament / Behavior :** Peaceful small schooling catfish

**Sterbai Corydoras Breeding / Mating / Reproduction :** Non guarder, brood hider. They will not tend the eggs.

**Tank Size** : 20 gallons (38 liters), keep them in schools

**Compatible Tank Mates** : Similar sized fish, peaceful species.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : They feed on small crustaceans, worms and plant matter in the wild. They will go after sinking algae wafers, shrimp pellets, a good flake food or micro pellet food. Make sure they are getting enough to eat if they are being kept with more aggressive eaters like tetras.

**Tank Region** : bottom region, among the plants and in caves

**Gender** : When looking at them from the top of the tank, females will be thicker, wider.

**Photo Credit** : Matthew Mannell

**Author** : Mike FishLore

## UPSIDE DOWN CATFISH - SYNODONTIS NIGRIVENTRIS



The Upside Down Catfish (*Synodontis nigriventris*) is an interesting catfish that starts swimming upside down at around two months of age. They are frequently found near cover such as driftwood, caves or plants. They do well in groups of 5 or more and they will do well fish species that have similar water requirements and temperament. They get to around 3.75 inches (9.6 cm) when grown and an aquarium that is 30 gallons in size or larger is recommended.

They are omnivores and will eat algae, sinking pellet foods, fresh veggies like zucchini or cucumbers. Keep them in groups and provide plenty of driftwood, caves, etc. to help make them feel at home.

### Upside Down Catfish Profile Facts and Aquarium Care Information

**Scientific Name :** *Synodontis nigriventris*

**Common Names :** *Upside Down Catfish, Blotched upsidedown catfish*

**Care Level :** Easy

**Size :** Up to 3.75 inches (9.6 cm)

**Water Parameters :** pH 6 - 8 | Temperature : 71°F - 79°F (22°C - 26°C) | Water Hardness : 5° to 12° dH

**Lifespan :** several years

**Origin / Habitat :** Congo River Basin in Africa

**Temperament / Behavior** : Somewhat shy and reclusive

**Upside Down Catfish Breeding / Mating / Reproduction** : No successful breeding attempts in the home aquarium that we know of. They are egg layers and will tend to the eggs.

**Tank Size** : 30 gallons (115 liters), does well in groups

**Compatible Tank Mates** : Similar sized fish species with similar water requirements.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Considered an omnivore but will eat lots of algae and may go after sinking pellets and algae wafers.

**Tank Region** : Likes to hide near caves or driftwood

**Gender** : Males may be darker colored and slightly smaller.

**Photo Credit** : Neale Monks

**Author** : Mike FishLore

## ZEBRA PLECO - HYPANCISTRUS ZEBRA

### *Hypancistrus Zebra*



The Zebra Plecostomus is a spectacular catfish that is wanted by nearly every fish keeper but unfortunately purchasing it is not always that easy as they demand a high price, much more than the normal rate. This fish is also commonly known as the Zebra Pleco, Imperial pleco or by the L numbers; L46 or L98.

The zebra pleco has bold black lateral stripes running across a white body with a black stripe running over the body from one pectoral fin to the other. The dorsal fin has a high expansion and it is possible to develop a blue twinge when in prime condition. It has a sucker mouth with 4 whiskers. Like other pleco's it has a flat-ish stomach.

These pleco's come from the rivers of Rio Xingu, Para and Brazil. They require a pH of 6-7.5 but seem to be doing best in a water pH of 6.5 or just under 7.0. A minimum tank size of 30 U.S gallons (113 liters) is required and a temperature of 78 - 86 °F (26 - 30 °C).

Rocks and decorations should be placed in the aquarium in a way that caves and hiding places are created for them, so that they can take refuge when necessary. It is believed the more hiding places there are the more they will come out into the open, knowing they will be able to hide whenever they want. Fine sand or river gravel should be used for substrate. Rocks should be placed in the aquarium to imitate its natural environment as well as driftwood. A powerful filter is needed as they require a strong current.

They are shy, nocturnal fish, generally coming out at night. Competing for food is not something this fish is good at. If other bottom dwellers are kept along with the zebra pleco, be sure that they aren't of the aggressive nature, gobbling the food without the zebra pleco getting any of it. It is known for them to be territorial towards their own species as well as a small retreat they may take as their territory, hence the reason caves are needed, especially if more than one zebra pleco is kept in a single aquarium. They grow between 3 - 4 inches (7.5 - 10 cm) and their lifespan is known to be about 10 - 15 years.

When first introduced to the aquarium it is essential to make sure that the zebra pleco is getting food. Due to their shy nature they may be too shy to come out into the open to eat. Feeding

them in quiet spots where they don't feel threatened is advised. As this is an expensive fish, going one step further in its care taking is not a bad idea. Zebra plecos are omnivores. Live and frozen foods, such as blood worms and brine shrimp can be fed, however live foods are more appreciated. Crushed peas with the skin removed, corgette, also known as zucchini or baby marrow are good for the veggies part of the diet. Tetra prima and algae wafers too, can be fed.

To be able to tell their genders, the male has a broader head and the first pectoral fin ray is thicker for the male than the female. Also he has thicker hairs on the pectoral fins, while the female's is visibly thinner. The females head is also decidedly rounder than the males.

With the temp at 82 °F, the aquarium well aerated and caves or driftwood that resembles a cave, spawning can take place. Spawning takes place in several batches within the cave. The male will at first block the cave entrance with his head. Eventually the female then persuades him away from the entrance of the cave to fertilize the eggs. The male may even push her out of the cave. 99 % of the time, the first spawning will be a false test with none of the eggs hatching. The male will guard the fertilized eggs and the female won't even be allowed into the cave. There are usually 7 - 15 eggs laid in each spawning. The eggs take 7 days to hatch and by day 10 of the fry's life, the yolk sac will be gone. They will take most fry food as soon as the yolk sac is gone. It takes 2.5 months for them to reach 1" (2.5 cm).

### Zebra Pleco Profile and Catfish Care Information

**Scientific Name:** Hypancistrus Zebra

**Common Name(s):** Zebra Pleco, Imperial Pleco, L46, L48

**Care Level:** easy to medium

**Size:** 3 - 4 inches (7.5 - 10 cm)

**pH:** 6.5 - 7.0

**Temperature:** 78 - 86 °F (26 - 30 °C)

**Origin / Habitat:** South America: Xingu River basin (fishbase).

**Lifespan:** 10 - 15 years or longer

**Temperament / Behavior:** Can become territorial with their own species, but are usually peaceful with most other tank mates.



**Compatible Tank Mates:** Needs to be with peaceful tank mates.

**Breeding / Mating / Reproduction:** See breeding section in the article above.

**Diet:** Omnivorous, will accept a wide range of foods, but frozen/live foods preferred. Supplement their diet with zucchini slices and similar veggies.

**Tank Size:** A minimum of 30 gallons

**Gender:** See article above.

**Forum Photos :** [Pleco Photos](#)

**Fish Lore Forum :** [Pleco Forum](#)

### References

- Catfish, A complete Pet Owner's Manual by Gary Elson and Oliver Lucanus

## CICHLIDS

### AFRA CICHLID

*Cynotilapia afra* (afra cichlid) are brightly colored mbuna from Lake Malawi Africa. The afra cichlid makes a wonderful fish for any mbuna tank.



Photo Credit and Copyright: SteveAngela

#### Afra Cichlid Profile and Catfish Care Information

**Scientific name:** *Cynotilapia afra*

**Common name:** Afra Cichlid

**Care-level:** Easy

**Size:** 3-4 inches

**pH:** 7.8-8.2

**Temperature:** 78-80 degrees F

**Origin/Habitat:** Lake Malawi Africa

**Lifespan:** 18 years

**Temperament / Behavior:** Mildly aggressive

**Breeding:** Maternal Mouthbrooder

**Compatible Tank mates:** Other malawi mbuna should not mix more than one type of *Cynatilapia* due to hybridization and fighting. Will mix well with labs and Afras.

**Fish Disease:** Signs and treatments for some common freshwater fish disease hole in the head and malawi bloat

**Fish Food:** Omnivore, needs diet low in protein and fresh veggies.

**Tank Region:** Bottom of Aquarium

**Gender:** Males are brightly colored where females are brownish to greyish.

**Tank Size:** Minimum of 55g Tanks need to be long rather than tall.

**Similar Species:** Cichlids.

## FRESHWATER ANGELFISH - PTEROPHYLLUM SCALARE

The freshwater Angelfish is a very popular tropical fish because of its unique shape and because of their interesting personalities. Freshwater angelfish are aggressive eaters and will go to the top of the tank when they see you approach. Because of their aggressive feeding habits, make sure that your less aggressive fish are getting their share around feeding time.

Angel fish are curious about their environment and can become very territorial, especially around breeding time. They will pair off and if any other fish tries to enter their territory they will go after them. So use caution when stocking.

Freshwater Angelfish are not picky eaters. They will go after many types of fish food, including vitamin enriched flakes, frozen, freeze dried and live foods.

They prefer tall tanks over short tanks because of their tall body shape.

### Angelfish Pictures



### Freshwater Angelfish Profile Facts and Care Information

**Scientific Name :** Pterophyllum scalare

**Common Names :** *Albino, Black, Gold, Silver, Marbled Angelfish, Koi Angelfish, etc.* - seems there is a common name for each color variety.

**Angelfish Care Level :** Easy

**Size :** Up to 6 inches (15 cm)

**pH :** 6 - 7.5

**Temperature :** 74°F - 84°F (23°C - 29°C)

**Water Hardness :** 5° to 13° dH

**Lifespan :** 8 - 10 years

**Origin / Habitat :** Amazon River

**Angelfish Temperament / Behavior :** Generally peaceful, but can be aggressive eaters and may become territorial while breeding.

**Breeding Angelfish / Mating / Reproduction :** Aquarium bred angelfish can breed in 7.5 or lower pH. Angelfish can breed in 78-80F water, but cooler water works as well, the fry just develop slower. They will lay the eggs on a vertical or diagonal surface. Assuming you have a pair, they are not difficult to breed. Read the article on [breeding Angelfish](#) for more information.

Listed below is a short video on an Angelfish taking care of a fresh hatch:

[Angelfish Breeding Video](#) (Low Speed - 188 KB)

[Angelfish Breeding Video](#) (High Speed - 1.5 MB)

**Tank Size :** 20 gallon minimum, prefer tall aquariums

**Angelfish Compatible Tank Mates :** Jump to profiles of fish that could potentially be kept with this fish:

[Pleco](#), [Blue Gourami](#), [Dwarf Gourami](#), [Larger Tetras](#), [Bala Shark](#)

**Freshwater Angelfish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Angelfish Diet / [Fish Food](#) :** Usually very good eaters, they will take flakes, pellets, freeze dried

(re-hydrated before feeding to prevent bloat and other issues - blood worms, [brine shrimp](#)) and especially live foods and fresh veggies.

**Tank Region :** All levels of the aquarium.

**Freshwater Angelfish Gender :** There are no visible differences between the male and female. Only at spawning will you be able to tell the male from the female. A female has a round "tear-drop" shaped breeding tube and a male has a cone shaped breeding tube. See the [How To Sex Angelfish](#) thread on the forum for more details.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Angelfish Forum](#)

Also see the [Different Types of Angelfish](#) thread on the forum.

## BLUE DOLPHIN CICHLID - CYRTOCARA MOORII



The Blue Dolphin Cichlid (*Cyrtocara moorii*) comes from Lake Malawi in Africa. They sport different shades of blue depending on the lighting they are under. This is a very pretty fish and you can find them online for anywhere from \$10 to \$20. The blue dolphin is considered to be one of the more difficult cichlids to breed and can become quite aggressive with tank mates around spawning time. Females will mouth brood the fertilized eggs until they are ready to be released 12 to 18 days later. Keep them in a larger tank of 90 gallons or more is recommended.

The Blue Dolphin Cichlid grows to be about 8 inches (20 cm) and possibly slightly larger when fully grown.

### Blue Dolphin Cichlid Profile Facts and Care Information

**Scientific Name :** *Cyrtocara moorii*

**Common Names :** *Blue Dolphin Cichlid, Hump Head Cichlid*

**Blue Dolphin Cichlid Care Level :** Easy to keep and will adapt to a range of water parameters

**Size :** 8 inches (20 cm)

**Water Parameters :** pH 7.2 - 8.8 | dH range: 10 - 18 | Temperature : 75°F - 79°F (24°C - 26°C)

**Lifespan :** 7 to 10 years

**Origin / Habitat :** Africa, found in Lake Malawi in shallow water (3 to 15 meters) over sandy bottoms (ref: fishbase)

**Temperament / Behavior :** They are cichlids so they can be scrappy and will do best in a species only tank or with other cichlids from Lake Malawi in a larger tank. They may fight or chase smaller species and they will become more aggressive when they are spawning.

**Blue Dolphin Cichlid Breeding / Mating / Reproduction :** Females mouth brood the eggs for 12 to 18 days and then release the free swimming fry.

**Tank Size :** 90 gallon or larger recommended when keeping multiples

**Compatible Tank Mates :** Many hobbyists keep them in biotope type setups with other cichlids from Lake Malawi

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Get them on a good pellet food made for cichlids (cichlid sticks) and supplement their diet with thawed foods like brine shrimp, mysis shrimp, bloodworms, etc. from time to time.

**Tank Region :** Lower regions of the aquarium.

**Gender :** Males will grow a hump (nuchal hump) on the forehead

**Author :** Mike FishLore

**Photo Credit:** Magnus Manske



## COCKATOO CICHLID - APISTOGRAMMA CACATUOIDES



The cockatoo cichlid (*Apistogramma cacatuoides*) is sometimes known as the big mouth cichlid because of its large mouth. The cockatoo cichlid has many colour variations such as the full red, double red, triple red, super red and orange. It has vibrant orange and red fins, a little bit of black bit with a grayish body and a black line mid-way through the body which goes the entire way down from the eye to the tail fin.

The Cockatoo cichlid is a member of the apistogramma (South American Dwarf Cichlid) family. It is from the streams and backwaters of the Amazon River. The bottom of the river is usually littered with leaves and slow moving. They prefer soft and slightly acidic water with a pH from 6.0 - 7.0 with a KH (carbonate hardness) of 2 - 15 and a temperature of about 79 - 84 F (26 - 29 C).

The male cockatoo cichlid can get to 2 - 3.5" (5 - 9 cm) long and the females are usually smaller than the males like most cichlids. The first 3 - 5 fin rays of the males is elongated, like the German Blue Ram (*apsitogramma ramerzii*), and the end of the dorsal fin is pointed. The male's tail fin is forked and the anal fin is long and pointed. Like some other cichlids, the male is more colorful then the females.

The tank for these little cockatoo cichlids should be full of plants and plenty of hiding spots for them. Unlike larger cichlids, they won't dig up the plants in the tank. The darker the substrate, the more colorful the males will appear as well as make them feel more at home. They also like driftwood and plants with lots of roots above the bottom. The water should be clean and regular partial water changes are needed. They like medium sized live food like brine shrimp with flakes/granules and also frozen food as a main food.

They can get really territorial when spawning or if there are too many males in the tank. If you want them with other dwarf cichlids, make sure that they have plenty of space in the footprint (the area of the base) and lots of hiding places like caves or live plants.



Photos by Howeyg

## Cockatoo Cichlid Fish Species Profile and Care Information

**Scientific Name :** *Apistogramma cacatuoides*

**Common Names :** *Cockatoo Cichlid*

**Care Level :** Medium, since you need a well-established tank for them

**Size :** 2 - 3.5 inches (5 - 9 cm)

**pH :** 6.0 - 7.0

**Temperature :** 79 - 84°F (26 - 29°C)

**Water Hardness :** prefers soft water

**Lifespan :** usually around 3 - 5 years

**Origin / Habitat :** Streams and backwaters of the Amazon River

**Temperament / Behavior :** They are quite peaceful except during the breeding process.

**Breeding / Mating / Reproduction :** The best ratio for breeding is 1 male to 3 or more females. Breeding them is not very easy in the home community aquarium.

**Tank Size :** 20 gallons (78 liters) minimum for each pair

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** They should accept nearly all aquarium fish foods including flakes, frozen, freeze dried, live and cichlid pellets.

**Tank Region** : Bottom to middle areas of the tank.

**Gender** : The males are more colorful and have a forked tail as well as a pointed anal and dorsal fin.

**Gallery Photos** : [Cockatoo Cichlid Photos](#)

**Forum Photos** : [Cockatoo Cichlid Pictures](#)

**Similar Species** : [Cichlids](#)

**Fish Lore Forum** : [Cockatoo Cichlid Forum](#)

## CONVICT CICHLID - ARCHOCENTRUS NIGROFASCIATUS

The Convict Cichlid is probably ranked number 3 out of all cichlids as far as popularity goes, with Angelfish and Oscars being 1 and 2 respectively. Convict Cichlids have the common name of "convict cichlid" because of the white and black contrasting patterns they sport. Males may be larger than females of the same age and the females may have a pink or orange tint to the belly region. There is an Albino Convict Cichlid as well. This fish can get to be about 4 inches (10 cm) and should do fine in a 20 gallon (78 liters) or larger aquarium.

The Convict Cichlid is a fascinating species that is known as being a prolific breeder. If you have a male and female, chances are you're going to get some baby convicts soon. All they need are stable water parameters and a cave or flower pot for securing the eggs. They will get quite aggressive in protecting their territory and they should not be kept with peaceful community type fishes. The great part about breeding convict cichlids is watching the parental care given to the fry. This can provide hours of enjoyment.

Keeping a pair of convict cichlids in a community tank is just asking for trouble. If you have only one, you may be able to get away with keeping them with peaceful species but caution is still advised.

These cichlids should eat nearly everything offered including flakes, frozen and live foods. Look for cichlid pellets which can give them all the vitamins and minerals they need.

### Convict Cichlid Photo



### Convict Cichlid Profile Facts and Care Information

**Scientific Name :** *Archocentrus nigrofasciatus*

**Common Names :** *Convict Cichlid, Zebra Cichlid, Albino Convict*

**Convict Cichlid Care Level :** Easy

**Size :** Up to 4 inches (10 cm)

**pH :** 7 - 8

**Temperature :** 70°F - 80°F (21°C - 27°C)

**Water Hardness :** 10° to 15° dH

**Lifespan :** 8 - 10 years, maybe slightly longer

**Origin / Habitat :** Guatemala, Central America

**Temperament / Behavior :** Like many cichlids, the convict cichlid is no exception when it comes to defending its territory, especially when breeding. They will protect themselves and may harm other fishes.

**Breeding / Mating / Reproduction :** Very easy to breed them and they are great parents. Provide a clay or plastic type of cave (flower pot) and they should pair up assuming you have a male and female. They should place the eggs on the walls or top of the flower pot. Eggs should hatch within 3 to 4 days and the parents may relocate them to a pit where they can watch over them. Another 4 to 5 days later they should be free swimming and you should feed them crushed flake food and/or brine shrimp.

**Tank Size :** 20 gallons (78 liters)

**Compatible Tank Mates :** If you're trying to breed them it's best to keep them as a pair in a tank by themselves. They should do well with other larger cichlids but you may see some aggression from time to time. Don't put convict cichlids in a community aquarium.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** They should accept nearly all aquarium fish foods including flakes, frozen, freeze dried, live and cichlid pellets.

**Tank Region :** Bottom to middle areas of the tank.

**Gender :** Males may be larger than females of the same age. Females usually have pink or orange on the belly. Males may have longer dorsal fins.

Author : Mike FishLore

Fish Lore Forum : Convict Cichlid Forum

## PSEUDOTROPHEUS DEMASONI CICHLID - DWARF MBUNA



The *Pseudotropheus demasoni* cichlid originates from Lake Malawi in Africa at a place called Pombo Rocks. This dwarf mbuna cichlid is not all that common in the hobby and they can fetch a hefty price tag for freshwater fish. You can find them online going for \$20 to \$30 a piece. It's also recommended that they be kept in groups. A 55 gallon or larger with an aragonite based substrate (help with pH) and lots of rock work to provide cover and caves for them is needed.

Some hobbyists recommend keeping them in groups of 7 or more and others think at least 10 or 12 or more is needed for better long term success. This is to limit any behavioral issues and spread out any male aggression among the group.

They are listed on the IUCN redlist listed as vulnerable due to their limited range.

### Pseudotropheus Demasoni Cichlid Profile Facts and Care Information

**Scientific Name :** *Pseudotropheus demasoni*

**Common Names :** *Demasoni cichlid, Dwarf Mbuna*

**Care Level :** Easy to keep and a good beginner's cichlid.

**Size :** 2.5 inches (6.3 cm)

**Water Parameters :** pH 7.4 - 8.4 | dH range: 7 - 30 | Temperature : 73°F - 80°F (23°C - 27°C)

**Lifespan :** 5 years, likely longer

**Origin / Habitat :** Africa: Lake Malawi, found at Pombo and Ndumbi reefs in Tanzania in 3 to 4 meters of water.

**Temperament / Behavior :** Males may fight with other male demasoni cichlids and will defend their turf from any would be trespassers.

**Pseudotropheus demasoni Cichlid Breeding / Mating / Reproduction :** Female will mouth-brood for 14 to 20 days. Free swimming fry should be removed to their own tank for grow out and fed enriched brine shrimp, daphnia, etc.

**Tank Size :** 55 gallon or larger recommended because they do better when kept in larger groups.

**Compatible Tank Mates :** Keep them with similarly sized mbuna's with similar water requirements.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** A steady diet of algae type foods such as spirulina, algae wafers and you can try nori on a veggie clip. Mix in brine shrimp, mysis shrimp or similar occasionally.

**Tank Region :** Likes to stay near their rocky caves but will be out and about.

**Gender :** Females will not be as deeply colored as the males and has no spots on the anal fin.

**Similar Species :** Cichlids

**Photo Credit:** Ged (wikimedia)

**Author :** Mike FishLore



## DISCUS FISH - SYMPHYSODON AEQUIFASCIATUS

The Discus fish is known as the King of the Aquarium. Perhaps the most beautiful of all tropical fish, the Discus fish is also one of the more difficult tropical fish to keep and is not recommended for beginners. Discus require excellent water conditions, frequent water changes and higher water temperatures than most other tropical fish. Most successful keepers house their Discus in a species only tank because of the high water temperature requirement.

There are many color varieties of Discus to choose from with many more being introduced all the time. If you are interested in this fish, be prepared to spend some jack on this one of a kind tropical fish. If you're on the market to buy Discus, there are many online websites that specifically sell Discus. Shop around and get recommendations from others for good places to buy them.

Many fish keepers will only get the best available foods for this fish. Vitamin enriched flakes and live, frozen and freeze dried foods can be given.

See the [Discus Care Sheet](#) on the forum for more details on keeping Discus.

### Discus Pictures



### Discus Fish Profile Facts and Care Information

**Scientific Name :** Symphysodon aequifasciatus

**Common Names :** *Many, due to color patterns: Cobalt Discus, Blue Discus, Blue Faced, Blue-Head, Red Thunder, Blue Red Turquoise, Marlboro Red, Pigeon Blood, Green, Brown, Snake Skin, Spotted Strawberry, the list goes on and on and on.*

**Discus Care Level** : Moderate to Difficult, needs frequent partial water changes to keep water parameters at optimum levels.

**Size** : Up to 6 inches (15 cm)

**pH** : 5 - 7

**Temperature** : 80°F - 86°F (27°C - 30°C)

**Water Hardness** : 1° to 8° dH,

**Life span** : If well cared for, they can live for 10 years or more.

**Origin / Habitat** : Amazon River

**Discus Temperament / Behavior** : Very peaceful most of the time. They may become territorial when they pair off to breed.

**Discus Breeding / Mating / Reproduction** : Breeding them can be very difficult because of the pristine water conditions that they require.

**Discus Tank Size** : 30 gallon minimum, prefer tall aquariums

**Discus Compatible Tank Mates** : It is usually best to keep them in a species only tank because of their water requirements. The Cardinal tetra and Corydoras, Cory Cat are sometimes kept in tanks with them and make good tank mates.

**Discus Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Discus Diet / Fish Food** : Prefer live foods but you may need to supplement with foods enriched with vitamins. Try to vary their diet for optimum health. There are foods made specifically for Discus.

**Tank Region** : Middle

**Discus Gender** : The genital papilla is pointed in male Discus, and rounded in females. You have to observe them when they are spawning.

**Author** : Mike FishLore

**Fish Lore Forum** : Discus Forum

## FIREMOUTH CICHLID - THORICHTHYS MEEKI

The Firemouth Cichlid is often recommended as a great first cichlid for beginners to cichlid keeping. The Firemouth Cichlid can be extremely hardy and will tolerate a wide range of water parameters. Obviously, they are great adapters but try to maintain them at recommended parameters (see below). If you're interested in this cichlid it should be relatively easy to locate them at a local fish store and since they are so common they should be inexpensive.

The Firemouth Cichlid gets to be around 6 inches or so as adults. Flat rocks formed into caves can be a good idea and it can help make them feel secure. Keeping them with live plants can be challenging since they sometimes will dig in the substrate. If you're interested in breeding them, you will need to provide an over turned flower pot, pvc pipe or something similar for them to deposit their eggs in.

The Firemouth Cichlid get their common name "firemouth" because of the display of the males in this species around spawning time. They develop a red coloration on the bottom side of the body and can extend the red area under the gills to warn other fish to keep out of their territory. Many hobbyists keep them in tanks with other species but it is recommended that you use caution if you plan on doing the same. While they are not as aggressive as some other cichlids, they can still get territorial around breeding time.

The Firemouth cichlid is not picky when it comes to fish food. Flakes, live and frozen foods are taken with gusto. There are many fish foods (pellets, sticks) made especially for cichlids that can be a great source for most of the vitamins, minerals and other nutrients they need to thrive.

### Firemouth Cichlid Picture



Photo Credit: Chris Ramejkis

[Firemouth Cichlid Profile and Cichlid Care Information](#)

**Scientific Name :** Thorichthys meeki

**Common Names :** *Red Breasted Cichlid*

**Firemouth Cichlid Care Level :** Easy to Moderate

**Size :** 6.7 inches (17 cm), possibly larger

**pH :** 6.5 - 7.5

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Lifespan :** 8 years or longer

**Origin / Habitat :** Central America, Belize river, Mexico, Guatemala

**Firemouth Cichlid Temperament / Behavior :** May get aggressive when they form pairs and are breeding.

**Breeding / Mating / Reproduction :** Get them ready by providing high quality foods and you may want to raise the tank water temperature slightly. Slowly raise the temperature a couple of degrees over a 2 day time period (aim for a temp around 82°F or around 28°C). If they have paired off and are getting overly aggressive with their tank mates, you will need to use a tank divider or plan on separating them. They should place the eggs on a flat rock, tipped over flower pot or pvc pipe. The female Firemouth Cichlid will protect the eggs while the male protects the area around the nest. After 3 or 4 days, the eggs hatch and the parents will move them to another location for another couple of days until the babies are swimming. Like many cichlids, the firemouth is no exception when it comes to taking care of their young. Plan on feeding finely crushed flake foods, baby brine shrimp or other fry foods.

**Tank Size :** 30 gallon for a pair, much larger for multiples.

**Firemouth Cichlid Compatible Tank Mates :** Some hobbyists report that they keep them with larger tetras originating from Central America and they co-exist just fine with the Firemouth. Use caution and be prepared to remove fish if you see signs of aggression.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment. They are fairly hardy but are not immune to ich infestations. Use a quarantine tank for new arrivals!

**Diet / Fish Food :** This fish is not a picky eater. They should go after all foods and it is easy to provide a balanced diet. Using a Cichlid Pellet Food can provide many of the vitamins and nutrients they need. They may eat fish that are very small.

**Tank Region** : Likes to hang out by their turf.

**Gender** : Females are usually smaller, less colorful and males will develop an extended point on the dorsal fin.

**Author** : Mike FishLore

**Fish Lore Forum** : Firemouth Cichlid Forum

## JACK DEMPSEY FISH - CICHLASOMA OCTOFASCIATUM

The Jack Dempsey fish is a fairly popular Central American Cichlid and is named after the famous boxer from the 1920's. The common name for the Jack Dempsey may make you think that this fish is a bruiser. But, given the right setup, it can be a good tank mate if kept with similar cichlids. They will get more aggressive the more cramped they feel, especially if you have a mated pair. They will hold their own against more aggressive tank mates. Provide them with a cave or other territory they can call their own and they should settle in quickly.

The Jack Dempsey fish can be very hardy once acclimated to your tank and should live for a very long time if properly fed with a varied diet. Also, please keep in mind that they have no problem eating smaller tank mates.

If you have a mated pair you will soon find out that they breed easily and are remarkable parents. They will need a sandy or smaller sized gravel bottom so that they can dig a pit to transfer the fry to once they hatch. The adults will then guard their fry against any and all comers! You may need to remove the other fish from the tank if they become too dangerous to the other fish in the tank. Or use an aquarium divider to prevent any aggression.

The Jack Dempsey Fish can be a very cool fish to keep if you have the space and compatible tank mates. It's a very nice looking fish and they have great personalities.

### Jack Dempsey Fish Pictures



[Jack Dempsey Fish Profile and Cichlid Care Information](#)

**Scientific Name :** Cichlasoma octofasciatum

**Common Names :** *Jack Dempsey Fish, Electric Blue Jack Dempsey*

**Care Level :** Easy

**Size :** Anywhere from 6 - 10 inches (15 - 25 cm)

**pH :** 6 - 8.0

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 5° to 15° dH

**Lifespan :** 10 - 15 years or longer

**Origin / Habitat :** Wild caught specimens originate from Central America, Guatemala, and Southern Mexico but hobbyists usually will be buying a farm raised fish. They are often found in slow moving rivers and canals in Central America.

**Jack Dempsey Fish Temperament / Behavior :** If given a large enough tank (55 gallon or larger) you may not see them being overly aggressive. If you cramp them into smaller tanks, like most fish, they may become more aggressive. Watch them closely.

**Breeding Jack Dempsey / Mating / Reproduction :** If you have a mated pair, it is very easy to breed them. Give them a pot or cave structure and the female will drop the eggs with the male following after her fertilizing the eggs. Once the eggs hatch the parents will move them to a pit and defend them from tank mates. The parents can get very aggressive during this time and do a remarkable job of protecting their young fry. They will breed often and can produce hundreds of eggs per spawn. It is important to prepare for this and breed them responsibly.

**Tank Size :** 55 gallon minimum for one Jack Dempsey, much larger for multiples.

**Compatible Tank Mates :** Try to keep them with fish of similar temperament (other Central American Cichlids). Watch for aggressiveness and remove or use an aquarium divider if necessary.

**Jack Dempsey Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Usually very good eaters, they will take flakes, pellets, freeze dried (blood worms, brine shrimp) and especially live foods.

**Tank Region** : Middle to bottom

**Gender** : Females may be smaller and less colorful.

**Author** : Mike FishLore

**Fish Lore Forum** : Jack Dempsey Cichlid Forum



## JAGUAR CICHLID - PARACHROMIS MANAGUENSIS



The Jaguar Cichlid (*Parachromis managuensis*) is found in very warm and turbid lakes in Central America. It is a highly predatory species that will prey on smaller fish and inverts. The Jaguar Cichlid grows to be about 21 inches (55 cm) and fish base has them listed at 62 cm (24.8 inches) as max total length. This is a big fish that needs a big tank.

This cichlid will become very aggressive with tank mates if it forms a pair for spawning. They will defend their eggs and fry until they become free swimming at which time the baby cichlids will need to be placed in their own tank for raising to prevent the adult fish from eating them.

### Jaguar Cichlid Profile Facts and Care Information

**Scientific Name :** *Parachromis managuensis*

**Common Names :** *Jaguar Cichlid, Aztec Cichlid, Spotted Guapote, Tiger Guapote, Managuense*

**Jaguar Cichlid Care Level :** Easy to keep and will adjust to a relatively wide range of water parameters.

**Size :** 21 inches (55 cm)

**Water Parameters :** pH 7 - 8.7 | dH range: 10 - 15 | Temperature : 75°F - 79°F (25°C - 28°C)

**Lifespan :** 10 years, likely longer

**Origin / Habitat :** Central America: Ulua River (Honduras) to the Matina River (Costa Rica) found at depths of 3 to 10 meters (10 to 32 feet) (ref: fishbase)

**Temperament / Behavior** : This is a big cichlid that will eat smaller fish.

**Jaguar Cichlid Breeding / Mating / Reproduction** : The pair will clean a flat surface where the female will deposit the eggs and the male will fertilize them. The parents will guard the eggs and fry. Eggs hatch in 5 to 7 days and should be removed from the breeding tank to prevent the adult cichlids from eating them once the fry are free swimming. Brine shrimp can be offered to the fry and then subsequently larger foods as they grow.

**Tank Size** : several hundred gallons

**Compatible Tank Mates** : Other large cichlids in extremely large tanks

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Provide them a base diet of cichlid pellets and supplement larger specimens with crickets, worms, thawed freshwater fish.

**Tank Region** : All over the aquarium.

**Gender** : Females are smaller in overall size and males have longer dorsal fin

**Similar Species** : Cichlids

**Photo Credit**: George Chernilevsky

**Author** : Mike FishLore

## JEWEL CICHLID - HEMICHRROMIS BIMACULATUS

The Jewel Cichlid originates from Africa where they live in streams and river systems with mud bottoms. This jewel cichlid has a wide range of common names with some pet stores calling them the Blue Jewel Cichlid, Green Jewel, Jewel fish, etc. Their coloration in pet store tanks can be a little drab, but with proper feeding and a suitable aquarium, they should color up nicely. They are very hardy and should tolerate a range of water conditions, but may only breed in tanks with water on the acidic side and slightly elevated tank temperature. See the table below for more parameters.

This Jewel Cichlid can be quite aggressive, even more so when they form pairs and start breeding. They will not tolerate other fish in the tank when this happens. A tank divider is needed if you plan on stocking them with other fish. Given their nature, a separate tank is advisable if you want to keep a pair of these beauties. Once they have babies, like other cichlids, these are great parents and will defend their fry against any and all comers.

Feeding the Jewel Cichlid should be a breeze since they will accept nearly all fish foods you give them. Give them a varied diet of frozen, live, flakes and pellets and they should reward you with great health and colors.

Again, think twice before putting a Jewel Cichlid in a tank with less aggressive fish species. If you're keeping only one Jewel you **might** be ok, but keeping pairs will be a problem when keeping them with other fish. They also like to dig, so keeping them with live plants may be difficult.

### Jewel Cichlid Picture



## Jewel Cichlid Profile and Cichlid Care Information

**Scientific Name :** Hemichromis bimaculatus

**Common Names :** *Jewel Cichlid, Jewel fish, African Jewelfish, Two Spotted Jewel Fish, Green Jewel, Blue Jewel*

**Jewel Cichlid Care Level :** Easy to Moderate

**Size :** 5.5 inches (14 cm)

**pH :** 7 - 7.5

**Temperature :** 70°F - 74°F (21°C - 23°C)

**Lifespan :** 5 years or longer

**Origin / Habitat :** African rivers

**Jewel Cichlid Temperament / Behavior :** Can get aggressive when forming pairs.

**Breeding / Mating / Reproduction :** May get better results with slightly increased (a degree or two) water temperature. The female will lay the eggs on a flat surface. After 2 to 4 days, the eggs hatch and the parents will move them to another location for another couple of days until the babies are swimming. These jewel cichlids are great parents. Get your fry foods ready and plan on feeding finely crushed flake foods, baby brine shrimp or other fry foods.

**Tank Size :** 30 gallon minimum for a pair, much larger for multiples to limit aggression.

**Compatible Tank Mates :** Not recommended for community tank type setups. They can get very aggressive with tank mates when ready for breeding.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment. This cichlid is very hardy but you'll still need to slowly acclimate them to your quarantine tank. Watch for several weeks before introducing to your display tank.

**Diet / Fish Food :** Should accept flakes and pellet fish foods. The Jewel Cichlid will go after algae wafers and shrimp pellets too, so make sure your bottom feeders are getting enough to eat if they are housed with this cichlid.

**Tank Region** : Will roam all over the tank. Likes to guard a chosen spot in the tank around spawning time.

**Gender** : Difficult to determine, but males may become even more brilliantly colored when breeding. If you're interested in breeding them it may be advisable to get a group of six or more and wait for them to pair off. Once a pair is formed, remove the others from the tank to prevent fighting.

**Author** : Mike FishLore

**Fish Lore Forum** : Jewel Cichlid Forum

## KENYI CICHLID

Metriaclima Lombardoi (kenyi cichlid) are beautiful sweet looking cichlids from Lake Malawi Africa. Don't let the cuteness fool you! These Kenyi cichlids are extremely aggressive fish. They have great personalities and do recognize their owners when near the tank.



Photo Credit and Copyright: SteveAngela

### Kenyi Cichlid Profile and Catfish Care Information

**Scientific name:** Metriaclima lombardoi

**Common name:** Kenyi Cichlid

**Care-level:** Moderate

**Size:** 4-6 inches

**pH:** 7.8-8.2

**Temperature:** 78-80 degrees F

**Origin/Habitat:** Lake Malawi Africa, Rift Lakes

**Lifespan:** 18 years

**Temperament / Behavior:** Extremely aggressive!

**Breeding:** Maternal Mouth brooder

**Compatible Tank mates:** Other Malawi Mbuna, however caution when mixing with other kenyi (must only be in ratio of 1 male to 2+ females) and not with other fish from Metriaclima group due to aggression. Not compatible with other types of fish, not a community fish.

**Fish Disease:** Prone to hole in the head and malawi bloat.

**Fish Food:** Herbivore, needs low protein diet with fresh veggies on occasion.

**Tank Region:** Bottom of Aquarium

**Gender:** Males are Yellow with barring, females are blue with black barring.

**Tank Size:** Minimum of 55g Tanks need to be long rather than tall.

**Similar Species:** Other Cichlids.

## KRIBENSIS CICHLID - PELVICACHROMIS PULCHER

The common Kribensis Cichlid (Krib) is considered a great beginner cichlid because it can tolerate a range of water conditions and is one of the most popular of the cichlids. Kribensis Cichlids stay on the small side and are considered a dwarf cichlid, reaching about 4 inches (10 cm) as adults. They can be very colorful even though they may not look that way in the tank at the store. They should color up nicely with good care. They develop a red or even a purple looking region on the stomach area.

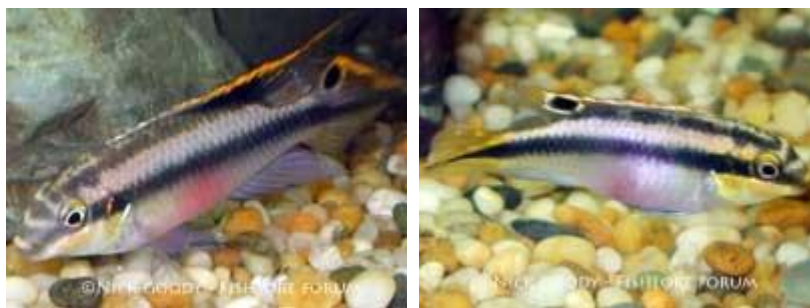
Although you'll hear about folks keeping Kribensis Cichlids in community type tank setups we would urge you to use caution if you plan on doing this. They can become very territorial when in breeding mode and will not tolerate tank mates in their territory.

Breeding the Kribensis Cichlid is fairly easy and if you're interested in breeding something besides livebearers you might be interested in getting a pair of kribensis. They are fantastic parents and will look after their young. See below for more information on breeding them.

The Kribensis Cichlid needs a varied diet with a good flake food or cichlid pellet serving as their primary diet. Supplement with live or frozen foods periodically. This becomes even more important if you want to breed them.

Regarding disease, most are now being farm raised but that doesn't mean that they can't contract something while passing through the various holding tanks before reaching your tank. Use a quarantine tank for a few weeks before introducing into your aquarium.

### Kribensis Cichlid Picture



### Kribensis Cichlid Profile Facts and Care Information

**Scientific Name :** *Pelvicachromis pulcher*



**Common Names :** *Kribensis Cichlid, Common Krib, Niger Cichlid, Purple Cichlid*

**Care Level :** Easy

**Size :** Up to 4 inches (10 cm)

**pH :** 6 - 8

**Temperature :** 75°F - 79°F (24°C - 26°C)

**Water Hardness :** 5° to 20° dH

**Lifespan :** 5 - 8 years or longer

**Origin / Habitat :** Africa, Nigerian rivers

**Temperament / Behavior :** The Kribensis is a cichlid and cichlids are known as fish that can take care of themselves and their territory. They are not recommended for community tank setups and will even fight amongst themselves around breeding time. The females can sometimes be the more aggressive except when the male is guarding the nest. This fish would be best kept in a species only tank.

**Breeding / Mating / Reproduction :** Kribensis Cichlids are considered easy to breed. They need clean water and they should be conditioned for a few weeks prior so they are in good condition for the upcoming event. They are wonderful parents and will protect their babies from any and all intruders. You will need a cave structure made out of rocks or an overturned flower pot or even some pvc pipe. The female initiates the spawning by dancing in front of the male. They will then select a cave like place where the female will deposit the eggs on the top part of the structure and the male will then fertilizing the eggs. The female will then guard the eggs and the males guards the mother and eggs. About 5 to 7 days later the Kribensis Cichlid eggs hatch and then in another 5 days or so the fry can swim. A good first food can be powdered flake food and baby brine shrimp. Some breeders are reporting that the fry sexes can be influenced by the pH of the water they are raised in. Alkaline water reportedly increases the number of males whereas acidic water increases the ratio of females.

**Tank Size :** 30 gallons (114 liters)

**Kribensis Cichlid Compatible Tank Mates :** Not recommended for community tanks although many hobbyists keep them with Tiger barbs and rosy barbs. Use caution and watch closely for signs of aggression if you keep them with other fish.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Get a good quality flake food and maybe some small cichlid pellets once they are large enough to eat them. They primarily eat insects, vegetation and small invertebrates in the wild. Vary their diet for good results.

**Tank Region :** Bottom to middle parts of the tank.

**Gender :** The females are usually more colorful and possibly smaller than males of the same age. The dorsal fins on the female may be rounded whereas they can appear pointy on the males. See this thread on [Sexing Kribensis](#) on the forum.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Kribensis Cichlid Forum](#)

## OSCAR FISH - ASTRONOTUS SPP.

The Oscar fish is also known as the Red, Albino and Tiger Oscar. Originating in the waters of the Amazon, the Oscar fish is another extremely popular fish. Their popularity stems from their personality, which has been compared to that of a puppy. Many keepers experience begging around meal times or the seemingly playful greetings they receive from their fish when they get home.

There are a few color varieties of the Oscar Fish including albino, olive-green, brown and dark gray. They can get quite large, usually 12-14 inches and should be kept in a 75 gallon or larger aquarium. The Oscar is also known for being one of the more messy tropical fish to keep. Try to get the best filtration system possible for them and be prepared to perform frequent water changes. They are known to rearrange their environment from time to time and to bash in to filter uptake tubes and heaters. If you are wanting to keep live plants in an aquarium you may not want to get an Oscar because they love to dig up plants. They are also very good jumpers, so a heavy hood is a necessity.

The Oscar Fish will eat most flakes, pellets, frozen, freeze dried and live foods including any other fish they share a tank with that are small enough to fit in their mouths.

Also see the [Oscar Care Sheet](#) on the forum.

### Oscar Fish Picture



### Oscar Fish Profile Facts and Care Information

**Scientific Name :** *Astronotus ocellatus*

**Common Names :** *Albino Oscar, Tiger and Red Oscar, Marbled Cichlid*

**Care Level** : Easy, good for freshwater beginners with a large enough tank and those with an adequate aquarium filter and those willing to perform frequent partial water changes.

**Size** : 13 inches (33 cm)

**pH** : 6 - 8

**Temperature** : 72°F - 80°F (22°C - 27°C)

**Water Hardness** : 5° to 20° dH

**Origin / Habitat** : Amazon

**Lifespan** : 10 - 13 years

**Oscar Fish Temperament / Behavior** : They can be aggressive if not given a large enough aquarium.

**Breeding Oscar Fish / Mating / Reproduction** : They reach sexual maturity at 4 inches and will form life long pairs. Keep the water temperature around 82°F (28°C) and provide a spot for them to place the eggs. A large rock would work well.

**Tank Size** : 75 gallon or larger.

**Oscar Fish Compatible Tank Mates** : Not many - Bala Shark, Silver Dollar, Pleco and Jack Dempsey fish are some acceptable tank mates. However, don't put in any fish that are small enough to fit in the mouth of this fish.

**Oscar Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Omnivore, will eat flakes, pellets, freeze dried and live foods. Give them a varied diet with lots of protein.

**Tank Region** : All over

**Gender** : Can be difficult to determine. The female is usually smaller and less colorful than a male of the same age.

**Author** : Mike FishLore

**Fish Lore Forum** : Oscar Forum



The Blood Red Parrot cichlid is an odd ball man made Hybrid that has stirred quite a bit of controversy in the fish world but has gained a huge popularity with many. Whether you approve of hybrid fish or not, these wonderful Blood Red Parrot Cichlids are here to stay. They are very compatible for a community tank as they are peaceful, curious and they interact well with their fish keepers once they get to know you. Blood Red Parrot fish should not be confused with the true Parrot Cichlid (*Hoplarchus Psittacus*) or the Salt Water Parrot (*Callyodon Fasciatus*).

When choosing Blood Red Parrot fish you will notice that the baby Parrots are very dark with stripes. As they start to grow they change color quickly from dark to a mottled black and orange to a true solid Orange. This happens very quickly within the first four months.

### Parrot Cichlid History

First created in Taiwan in the 1980's the Blood Red Parrot Cichlid was believed to be a cross between a male midas cichlid and a female red head cichlid but since then there have been many variations to include, Red Devil and Gold and Green Severums and lately to include the convict cichlid pairing as well.

You can recognize the blood red parrot at first sight due to the unique traits this fish possesses. Its beak like head and mouth and round body with large eyes are characteristic of this fish. Their mouths do not close but stay open in a perpetual "O" shape. Their teeth are far down their throats so they pretty much bump into each other but cannot bite and are no match for an aggressive fish due to this deformity produced during breeding.

### Behavior

BR Parrots are a shy fish that is timid but will acclimate to a community tank very nicely. They learn to recognize their owners and will come to the front of the tank to greet them. They do love

to have their own clay pots or caves to hide in and I would recommend caves in their tanks. They seem to have so much fun swimming in and out of the caves. I find these fish to be very playful and they interact very well with each other and with dither fish as they swim around the tank. I would recommend them for anyone with a tank large enough who would like a peaceful set up with active fish.



### Breeding Parrot Cichlids

Although Parrots will pair off and spawn the male Parrot is usually infertile and the eggs will die off. Successful spawning has resulted when the females have cross bred with non-hybrid fish such as the convicts and other cichlids such as the Severums and Midas. Female BR Parrots have been bred with male Convicts to create the Jelly Bean and Bubblegum Parrot. These are usually dyed Red, Green, Blue, Purple or Pink. These fish should be avoided so not to contribute to the horrific procedure these dyed fish are put through. Newly developed though are specimens that are a true pink, due to the cross breeding between the Pink Convict male and a BR Parrot female and are not dyed. They have been called Jelly Bean as well. There have been cases of Jelly Bean and Bubblegum breeding but do not mistake them for true Blood Red Parrot fish.

The Purple Blood Parrot is another popular Parrot that is not actually purple but a bright red and is not dyed. Another is the Love Heart BR Parrot, a tailless variety that has a heart shape body.

### Parrot Cichlid Diet

Feed your Parrots a variety of food, such as blood worms and brine shrimp as these seem to be their favorite foods. You can also feed them a quality pellet as well as a quality flake. Food high in b-carotene will help maintain their vibrant colors.

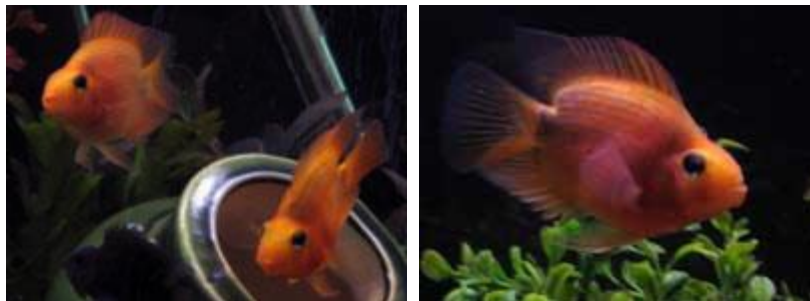
### Parrot Cichlid Compatibility

BR Parrots are compatible with many fish such as mid-size Tetras, Giant Danios, Cory cats or any catfish, Plecos, Kribbs, Severums and Angelfish. Convicts are a good choice as well, but be careful of any aggressive issues and the possibility of a spawn between these two species.

### Parrot Cichlid Tank requirements

Adult Parrot fish can reach 10 inches. Most males though will average 7-8 inches and females a bit smaller averaging around 6-7 inches. You should make sure they have ample swimming areas with clay pots or caves. Rocks and driftwood would complete a comfortable tank set up as they love to have places to hide. Water temperature should be maintained between 76-80°F. PH should be around 6.5-7.4. A smooth small sized gravel or sand is ideal. They are a hardy, undemanding fish that only require room to swim, compatible tank mates and good healthy foods in order to be happy. With the heavy bio load of Parrots, it is essential that you have good aquarium filtration.

I have 5 juvenile BR Parrots in my 55 gallon community tank that will move to a 120 gallon tank this spring. I cannot say enough of the joy these special fish have brought to me and when you look into those big beautiful eyes, you will find them hard to resist as well.



#### Parrot Cichlid Profile and Care Information

**Scientific Name :** none, a Hybrid Cichlid

**Common Names :** *Blood Red Parrot*, *Bloody Parrot*

**Care Level :** Moderate

**Size :** 8" (20 cm)

**pH :** 6.5 - 7.0

**Temperature** :72-82F (22-28C)

**Lifespan** : about 10 years

**Origin / Habitat** : Man-made, not present in Nature, but Parents are South American Cichlids

**Temperament / Behavior** : Peaceful

**Breeding / Mating / Reproduction** : Males are usually infertile. Can be bred with Midas, Severum and Convict Cichlids. Egg layer, open Breeder.

**Tank Size** : Minimum 42 gallons, additional 10 gallons for each thereafter.

**Compatible Tank Mates** : non aggressive fish species.

**Fish Disease** : [Freshwater Fish Disease](#)

**Diet / Fish Food** : omnivore, see above for more details.

**Tank Region** : Bottom- mid dweller

**Gender** : Even for experts, it is nearly impossible to sex them. Usually the only way is by dissection, or if they happen to lay eggs (an unlikely occurrence).

**Similar Species** : [Cichlids](#)

**Photo Courtesy** CapeKate

**About the Author** : See [CapeKate's Member Spotlight](#)



## POLIT CICHLID

Pseudotropheus Polit cichlids are highly aggressive mbuna from Lake Malawi Africa. Polit cichlids stay rather small compared to the others. However, don't let the size fool you these guys are mean little beauties!



Photo Credit and Copyright: SteveAngela

### Polit Cichlid Profile and Catfish Care Information

**Scientific name:** Pseudotropheus polit

**Common name:** Polit Cichlid

**Care-level:** Moderate

**Size:** 3-4 inches

**pH:** 7.8-8.2

**Temperature:** 78-80 degrees F

**Origin/Habitat:** Lake Malawi Africa

**Lifespan:** 18 years

**Temperament / Behavior:** Extremely aggressive!

**Breeding:** Maternal Mouth brooder

**Compatible Tank mates:** Other malawi mbuna not to be mixed with other Pseudotropheus groups. If put with other Polits needs to be 1 male to 2+ females.

**Fish Disease:** Signs and treatments for some common freshwater fish disease hole in the head and malawi bloat

**Fish Food:** Herbivore, needs diet low in protein and fresh veggies.

**Tank Region:** Bottom of Aquarium

**Gender:** Males are white with black mask, Females are greyish with black bar down side.

**Tank Size:** Minimum of 55g Tanks need to be long rather than tall.

**Similar Species:** Other Cichlids.

## GERMAN BLUE RAM CICHLID

*Microgeophagus ramirezi*, *Apistogramma Ramerzii*



The German blue ram cichlid or otherwise commonly known as the butterfly cichlid is another of the beautiful dwarf cichlids often desired by the aquarist. The Blue Ram Cichlid is a stocky fish with bright grey/blue flanks. Yellow, gold and black with blue are the coloration of the head and chest with a red patch on the belly. A black vertical line runs across the eye and red patch around it. It has a large yellow dorsal fin with black at the front edge and red marking the upper and lower lobes of the tail and dorsal fin. The pelvic fins are mostly red with blue.

These Blue Ram Cichlids come from the rivers of Venezuela, and Columbia. They require a temperature of 78-85°F (26-30°C) with 80-81°F (27-28°C) being the most acceptable and a pH 5.5 - 7.0. Soft water is best for them but it is known for some of them to adapt well to moderately hard water. Aquarists generally find it is not 'easy' to keep this fish, as they often die soon after purchase. This is because they need well established water to feel comfortable enough in and they can be picky eaters at first. Introduction to an established tank is essential as they are likely to die if the water is not 'old' enough.

As with other cichlids, hiding places should be provided for your Blue Ram Cichlid with decorations, plants etc. for shelter when there is aggression especially during the breeding period. They grow between 2 to 3 inches (5 - 7.5 cm), the female being the bigger of the two with a life span of approximately 3 years. A minimum tank size of 20 gallons (75.5 liters) is needed for each pair that is kept.

Most fish can be kept as tank mates with the Blue Ram Cichlid as long they are not extremely aggressive fish or fish that are big enough to eat them. Other male dwarf cichlids shouldn't be kept with them unless the tank exceeds 40 gallons. If the tank is less than 30 gallons it won't be a good idea to have more than one male ram as there may be territorial disputes.

German blue rams are omnivores. They will accept most food, however frozen or live foods are preferred more. Rams that are newly introduced to the aquarium sometimes tend to picky eaters,

refusing food or just nibbling. Frozen bloodworms/brine shrimp and live foods are best fed at this time. As it is observed that they are starting to eat more freely, slowly, pellets, flakes and other foods can be fed.

Identifying the gender in rams is not as difficult as might be expected. An adult female is stockier built, her tail has a more round edging and the red patch on her belly is bigger and bolder than the male. With males, the back of their dorsal and anal fins have more of a pointed edge, their tails have a V shape, are more sharp edged and they have an elongated 2nd ray in their dorsal fins. For more info on sexing your rams - [Sexing Ram Cichlids](#)

Pairing off rams does not often result in just having a pair together in a tank. Best results come by having a few rams together from a young age and letting them grow up together, pairing of their own accord. A pH of 5.5 - 6.5 is best for the pair, eggs and fry. German Blue rams can reach maturity at an early age, sometimes between 4 - 6 months. Once they have paired it is generally easy to get them breeding. However, the first few times may not come out right and it may end up with the pair fighting, especially if they are a young pair. Having different lighting times every day can distort their breeding. When ready to breed the red patch on the female's belly will be distinctly brighter and bigger in comparison with the male. A space on a rock will be cleaned or a pit created in the gravel by either of the pair, in which the eggs are laid. They will begin to show more interest in one another, by nudging or twirling. Every so often the male may suddenly dart away or slide his body against the female. The female can lay between 20 - 200 eggs. Both parents will tend to the eggs. Or, they may eat them, especially unfertile ones. They may spawn many times before they get right.

### Ram Cichlid Photos:



Picture Credit: Tom

### Blue Ram Cichlid Profile and Cichlid Care Information

**Scientific Name:** *Microgeophagus ramirezi*, *Papiliochromis ramerzii*, *Apistogramma Ramerzii*

**Common Name(s):** German Blue, German Blue Ram (GBR), Ram, Butterfly cichlid, Dwarf cichlid. Ramirez's cichlid

**Care Level:** medium-difficult, mostly because it needs a well-established tank

**Size:** 2 - 3 inches (5 - 7.5cm)

**pH:** 5.5 - 7.0

**Temperature:** 78-85°F (26-30°C) with 80-81°F (27-28°C) being the most acceptable. At these temperatures they will settle in better, be less susceptible to diseases and upon breeding will result in less fry being lost.

**Water Hardness:** Soft-medium hard

**Origin / Habitat:** The Rivers of Columbia and Venezuela

**Lifespan:** 3 years or longer

**Temperament / Behavior:** Peaceful, but when breeding, the male guards the eggs and can and will be very aggressive. If there are 2 males in a tank smaller than 30 gallons and without plenty of hiding places, they will show territorial disputes between them.

**Compatible Tank Mates:** Many except for large fish big enough to eat them or other male dwarf cichlids

**Breeding / Mating / Reproduction:** The eggs are laid on a pre-cleaned area or a depression they made in the substratum. The female can lay up to 200 eggs and the eggs hatch about 4 days later. After the first spawn, you can almost guarantee a spawn every month.

**Diet:** Omnivorous, will accept a wide range of foods, but frozen/live foods preferred.

**Tank Size:** A minimum of 20 gallons for each pair

**Gender:** [Sexing Ram Cichlids](#)

**Gallery Photos :** [Blue Ram Cichlid Photos](#)

**Forum Photos :** [Ram Cichlid Photos](#)

**Similar Species :** [Cichlids](#)

**Fish Lore Forum :** [Ram Cichlid Forum](#)

## References / More Info:

- The International Encyclopedia of Tropical Freshwater Fish By David Alderton
- 500 Freshwater Aquarium Fish by Greg Jennings
- Aquariums The Complete Guide to Freshwater and Saltwater Aquariums by Thierry Maitre-Allain and Christian Piednoir
- Complete Encyclopedia of the Freshwater Aquarium by John Dawes
- The Aquarium Fish Hand book By: David Goodwin
- The International Encyclopedia of Tropical Freshwater Fish By: David Alderton

## RED DEVIL CICHLID (AMPHILOPHUS LABIATUS)

The Red Devil Cichlid comes from Central America, namely Lake Nicaragua. The Red Devil Cichlid is perhaps one of the most appropriate common names of all fishes. It is called the "Red Devil Cichlid" because of its aggressive behavior. If you're looking for a fish that will terrorize nearly any fish you put in the tank, then this fish is for you! There are many color varieties out there including red, white and variations having both colors. Maybe this is the result of cross breeding with other cichlids?

The Red Devil Cichlid is one fish that will redecorate the tank to its liking. They love to dig and uproot plants, so you'll most likely end up taking the plants (plastic or real) out of the tank to prevent this. After they're done assaulting the other fish in the tank they like to retire to a peaceful cave they can call their own. All in a day's work, I guess. Seriously, this is one mean SOB that you don't want to keep with other smaller or less aggressive fish. Keep them singly or you may be able to keep them as a mated pair in a larger tank.

The Red Devil Cichlid will eat most everything you give them. This includes flakes, cichlid pellets, frozen foods, worms, crickets, and live feeder fish. Use caution when feeding feeder goldfish because of the disease element. Try to provide a balanced diet for them and not too much of the same foods all the time.

Males should be larger than females of the same age and may develop a nuchal hump on the head. They can be relatively easy to breed, provided that they get along. They will spawn on a flat rock and should be good parents, defending the fry until they are free swimming.



Photo Credit: Aron Day

### Red Devil Cichlid Profile and Cichlid Care Information

**Scientific Name :** *Amphilophus labiatus*

**Common Names :** *Red Devil Cichlid*

**Care Level :** Easy to Moderate

**Size :** 10 - 12 inches (25 - 30 cm), possibly larger

**pH :** 6.5 - 7.5

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Lifespan :** 10 years or longer

**Origin / Habitat :** Central America, in Lake Nicaragua and Lake Managua

**Red Devil Cichlid Temperament / Behavior :** Extremely aggressive cichlid that will not tolerate others in "their" tank. They will rearrange the tank to their liking and uproot plants.

**Breeding / Mating / Reproduction :** Breeds on flat rocks with the male and female both guarding the eggs. They should move the fry, once hatched (after 3 or 4 days), to a pit that they defend until the fry is free swimming. They should be free swimming between 5 and 7 days.

**Tank Size :** 55 gallon minimum for one Red Devil, much larger for multiples.

**Compatible Tank Mates :** Not many! They may or may not do ok with other, larger cichlids. You'll have best results keeping this fish by itself. You may be able to keep it with an opposite sexed red devils but watch for aggression.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Should accept most foods, including a good, balanced Cichlid Pellet Food, flakes and live foods. They will eat smaller fish.

**Tank Region :** All over the fish tank.

**Gender :** Females may be smaller and males may get a larger nuchal hump on the head. A nuchal hump is more common in male cichlids.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Red Devil Cichlid Forum](#)



## RED EMPRESS CICHLID - PROTOMELAS TAENIOLATUS



The Red Empress Cichlid (*Protomelas taeniolatus*) is also known as the Spindle Hap or the Red Empress. This cichlid gets to around 4.5 inches, maybe slightly large as adults. A 55 gallon with lots of rock cover would be a very good setup to start with. They are quite popular because of the male's rainbow like colors. Considered one of the less aggressive cichlids.

### Red Empress Cichlid Profile Facts and Care Information

**Scientific Name :** *Protomelas taeniolatus*

**Common Names :** *Red Empress Cichlid, Haplochromis Red Empress, Spindle Hap, Super Red Empress*

**Care Level :** Easy

**Size :** 4.5 inches (11.3 cm)

**Water Parameters :** pH 7.5 - 8.5 | dH range: 5 - 15 | Temperature : 75°F - 79°F (24°C - 26°C)

**Lifespan :** 5 years or longer

**Origin / Habitat :** Africa, Lake Malawi (endemic), rocky areas less than 10 m in depth (ref: fishbase)

**Temperament / Behavior :** Relatively peaceful for a cichlid, more aggressive when spawning

**Red Empress Cichlid Breeding / Mating / Reproduction :** Can become quite aggressive during spawning. They are egg guarders and really need their own tank for breeding.

**Minimum Tank Size** : 55 gallons or larger

**Compatible Tank Mates** : Similar sized fish, will fight with other cichlids

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Feeds on aufwuchs which is small animals and plants that encrust hard substrates. Primary diet can be cichlid pellets, give them thawed and live foods periodically. A flake food or pellet food with an algae/spirulina base is recommended.

**Tank Region** : All over the aquarium.

**Gender** : May have to wait until they are mature and the males will become more colorful.

**Similar Species** : Cichlids

**Photo Credit**: Derek Ramsey

**Author** : Mike FishLore

## PSEUDOTROPHEUS SAULOSI CICHLID - DWARF MBUNA



The Pseudotropheus Saulosi Cichlid comes from Lake Malawi in Africa. They are found near the upper part of the rocky reefs in strong currents. Adult males are blue with black bars and sub-adult juveniles and females are yellow. Even though they are considered a dwarf mbuna cichlid only reaching about 3.4 inches as adults, they still need a tank that is at least 55 gallons or larger to provide swimming room and to allow you to keep them in groups. Keeping the Saulosi Cichlid in groups of 5 or more will help with aggression issues from males.

This dwarf mbuna cichlid is considered a good candidate for a beginner to cichlids. They can be purchased for anywhere from \$7 to \$15 with price variations based on gender, size and colors.

The Pseudotropheus Saulosi Cichlid is listed on the IUCN red list of threatened species (listed as vulnerable) because it is only found in Lake Malawi with the threats being this restricted range and localized over-fishing.

### Pseudotropheus Saulosi Cichlid Profile Facts and Care Information

**Scientific Name :** Pseudotropheus saulosi

**Common Names :** *Pseudotropheus Saulosi Cichlid, Dwarf Mbuna*

**Care Level :** Considered easy to keep and a good beginner's cichlid.

**Size :** 3.4 inches (8.6 cm)

**Water Parameters :** pH 7.4 - 8.4 | dH range: 7 - 30 | Temperature : 73°F - 80°F (23°C - 27°C)

**Lifespan** : 5 years, likely longer

**Origin / Habitat** : Africa: Lake Malawi, found in Taiwan Reef (north of Chizumulu Island).

**Temperament / Behavior** : Males can become territorial and aggressive with other males.

**Pseudotropheus Saulosi Cichlid Breeding / Mating / Reproduction** : Males dig a pit in the sand and the female will mouth-brood (hold the fry in her mouth) for 12 to 18 days. The pair may become territorial, males more so.

**Tank Size** : 55 gallon recommended because they like to swim and do well when kept in groups.

**Compatible Tank Mates** : Keep them with similarly sized mbuna's

**Fish Disease** : [Freshwater Fish Disease](#)

**Diet / Fish Food** : A staple diet of algae based foods like spirulina, algae wafers and even nori on a veggie clip can be tried. They rasp at algae on the rock reefs of Lake Malawi. You can mix in brine shrimp, mysis shrimp or similar occasionally.

**Tank Region** : All over the aquarium.

**Gender** : Females and smaller males without territories have the yellow color whereas the males with dominance/territory will be blue with black bars.

**Author** : [Mike FishLore](#)

**Photo Credit**: Ged (wikimedia)

## SEVERUM - HEROS EFASCIATUS



The Severum (*Heros efasciatus*) is known as the common severum - the fish pictured is actually a wild collected *Heros notatus*. *H. efasciatus* gets to about 12 inches (31 cm) and needs at least a 55 gallon aquarium or larger.

### Severum Profile Facts and Care Information

**Scientific Name :** *Heros efasciatus*

**Common Names :** *Severum, Common Severum, Hero Cichlid*

**Severum Care Level :** Easy to keep and will adjust to a relatively wide range of water parameters.

**Size :** 12 inches (31 cm)

**Water Parameters :** pH 6 - 8 | dH range: 5 - 25 | Temperature : 75°F - 85°F (24°C - 29°C)

**Lifespan :** 5 to 8 years, maybe longer

**Origin / Habitat :** South America, Amazon River basin and its tributaries (ref: fishbase)

**Temperament / Behavior :** May eat smaller fish as it grows and can become aggressive with other fish (it is a cichlid)

**Severum Breeding / Mating / Reproduction :** Can become quite aggressive during spawning. They are egg guards and really need their own tank for breeding.

**Tank Size :** 55 gallons or larger

**Compatible Tank Mates** : Similar sized fish species, may fight with other cichlids

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Food items in wild fish include plants, benthic algae, insects and other fish. A cichlid pellet food (cichlid sticks) can form the primary portion of its diet.

**Tank Region** : All over the aquarium.

**Gender** : May have to wait until they are mature and the males will have more spots on the face and gills.

**Similar Species** : Cichlids

**Photo Credit**: Ferrari2503 (wiki)

**Author** : Mike FishLore

## SHELL DWELLER CICHLID - SHELLIES

*Neolamprologus multifasciatus*



Shell Dweller Cichlid - *Neolamprologus multifasciatus*, or for short, Multies are a special type of cichlid for many reasons. The first reason is they are shell-dwellers, or Shellies, which means that they live and breed in shells. In the wild, Shell Dweller Cichlids live on the bottom of Lake Tanganyika in Africa. They colonize the thousands of *Neothauma* snail shells and form territories of their own shells and live, sleep, and breed inside these shells. They mainly stay near these shells, and on the bottom, so it is best to get a short, long tank.

The second special thing about Multies is that they are the smallest cichlid in the world, the male's maximum size is 1.5 to 2 inches, and the female's maximum size is only around .75 to 1 inch long! This means that they are easier to keep in smaller aquariums.

For a tank setup, you can use almost any tank, preferably a 10 gallon, and if possible, go for a longer tank, since they use mainly bottom space. These fish are big diggers, so definitely have either sand or very fine gravel if you want to see this behavior. Also, they should have about 2-6 shells per fish, so they can choose which ones they want. You can use Apple snail, escargot, or practically any other type of shell you want, or also PVC elbows with caps can work fine too. Most filtration can work, just be careful that the fry can't get sucked up and make sure you do not use an UGF (Under-Gravel Filter) due to the possibility of sand compacting under it.

[Shell Dweller Cichlid Fish Species Profile and Care Information](#)

**Scientific Name :** *Neolamprologus multifasciatus*

**Common Names :** Multie, Shellie (For most shell-dwellers)

**Care Level :** Easy, as long as you have enough shells and good parameters.

**Size :** Males grow up to 1.5 - 2 inches (~5 cm); Females grow to .75 - 1 inch (~2.5 cm)

**pH :** Around 7.6 - 8

**Temperature :** 78 - 80° F (~25-26° C)

**Water Hardness :** 15°

**Origin / Habitat :** Lake Tanganyika in Africa

**Temperament / Behavior :** Can be aggressive to fish in their territory, and may eat fry if population gets too big.

**Breeding / Mating / Reproduction :** Make sure you have the tank set up like described in the opening paragraphs. Males will spawn with multiple females. They are egg-layers, but typically you will only tell that a spawn has occurred by seeing the tiny fry. Fry typically do not pick on each other, and parents are protective unless the population gets too big. Feed fry foods, baby brine shrimp, or finely crushed flakes. There should be from 4- 30 fry per spawn.

**Tank Size :** Preferably 5-10 gallons, the longer the better.

**Compatible Tank Mates :** Depending on the size of the tank, you may be able to have other fish that live in the upper regions, though do this with caution, as other fish can eat your fry. Don't mix shell-dweller species.

**Fish Disease :** [Freshwater Fish Disease](#)

**Diet / Fish Food :** Need a diet slightly high in protein.

**Tank Region :** Bottom

**Gender :** Males are larger.

**Profile by :** [Fish Addict](#)

**Photo Credit :** Richard Andre Ingebrigtsen, Department of Aquatic Biosciences, University of Tromsø

**Sources :** [http://www.cichlid-forum.com/articles/n\\_multifasciatus.php](http://www.cichlid-forum.com/articles/n_multifasciatus.php)  
- [http://www.gcca.net/fom/Neolamprologus\\_multifasciatus.htm](http://www.gcca.net/fom/Neolamprologus_multifasciatus.htm)



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- [http://aquamaniacs.net/forum/cms\\_view\\_article.php?aid=19](http://aquamaniacs.net/forum/cms_view_article.php?aid=19)

## YELLOW LAB CICHLID

Labidochromis caeruleus (yellow lab cichlid) are bright colored mbuna from Lake Malawi. The yellow lab cichlid are the less aggressive cichlids out of the mbuna.



Photo Credit and Copyright: SteveAngela

### Yellow Lab Cichlid Profile and Catfish Care Information

**Scientific name:** Labidochromis caeruleus

**Common name:** Yellow Lab, electric yellow

**Care-level:** Easy

**Size:** 4-5 inches

**pH:** 7.8-8.2

**Temperature:** 78-80 degrees F

**Origin/Habitat:** Lake Malawi Africa

**Lifespan:** 18 years

**Temperament / Behavior:** mildly aggressive

**Breeding:** Maternal Mouth brooder

**Compatible Tank mates:** Other malawi mbuna not to be mixed with other Labidochromis groups. If put with other Yellow Labs needs to be 1 male to 2+ females.

**Fish Disease:** Signs and treatments for some common freshwater fish disease hole in the head and malawi bloat

**Fish Food:** Herbivore, needs diet low in protein and fresh veggies.

**Tank Region:** Bottom of Aquarium

**Gender:** Extremely hard to sex, males tend to have deeper black on anal and dorsal fins.

**Tank Size:** Minimum of 55g Tanks need to be long rather than tall.

**Similar Species:** Other Cichlids.

## ZEBRA CICHLID - PSEUDOTROPHEUS SP.

*Pseudotropheus sp.*



The zebra cichlid also known as the Malawi blue or Malawi zebra cichlid and it originates from East Africa in the Lake Malawi. This thick cichlid has a swelled forehead and with a tall tail fin. The rear parts of the dorsal fin and anal fins are elongated and pointed on the Zebra Cichlid. The ends of the anal and dorsal fins have yellow egg spots and in this species there are many color varieties, blue being amongst the most common. Seven or eight blue/black bars run across the body and generally in this color variety the bottom part of the face is black as well. The scientific name for the Red Zebra is *Pseudotropheus estherae* and the common zebra cichlid is *Pseudotropheus zebra*.

The minimum tank size recommended for the Zebra Cichlid is 50 gallons (180 liters). They require quite hard water with a pH of 8.0 - 9.0 and will do well with a temperature between 72 - 82°F (22-28°C). The zebra cichlids adult size is 6 inches (15 cm) and they normally live for about 5 - 10 years in captivity. A few hardy plants should take their nibbling although more often they will either uproot or destroy most plants. It's worth a try though, as some people have managed to keep plants. Using rocks is a good way of decorating the tank. Be sure to create plenty of caves for those seeking safety from other aggressive tank mates. Another thing to keep in mind is they are diggers and are always piling up substrate/sand.

They are relatively easy to care for, feeding mainly on herbivorous diets although they are omnivores. Dried foods, plant matter, frozen foods and every so often meaty foods and live foods such as earth worms are good to feed. They are also algae grazers.

### Zebra Cichlid Tank Mates - Behavior

Tank mates should be chosen with a lot of care and should consist of other species from Lake Malawi. The jewel cichlid, also from Africa (Rivers - Nile, Niger, Zaire) are thought to be able to be kept with zebra cichlids. These fish are extremely aggressive and if a peaceful view is desired

when one glances at the tank, then these fish are definitely not the type to get. More males to females are advised. Males establish territories and defend them, while females tend to school.

### Breeding Zebra Cichlids

Best results in breeding is achieved by having 1 male for every 3 females. A displaying/shimmying male is usually trying to coax the females until they get them to breed. The female spawns on a flat rock or in a cave at the bottom of the tank and as many as 60 eggs can be laid. She then takes the unfertilized eggs in her mouth, following the male closely until he releases the sperm. The egg spots play an important role as it is thought that the female believes these are more eggs and goes to retrieve them and at this moment the male releases his sperm and fertilizes the eggs in her mouth. Unlike the South American cichlids after mating the male and female go their separate ways and the female cares for the eggs/fry herself. The eggs are rich with yolk and take a long time to hatch. Once hatched the yolk sac takes about 20 days to be absorbed. Being mouth-brooders, the female carries the eggs in her mouth until the eggs hatch. Newly hatched fry can be fed daphnia and dry foods.

### Zebra Cichlid Profile and Cichlid Care Information

**Scientific Name:** Pseudotropheus sp.

**Common Name:** Zebra Cichlid, Malawi blue or Malawi zebra cichlid

**Care Level:** easy to medium

**Size:** 6 inches (15 cm)

**pH:** 8 - 9

**Temperature:** 70-80 F (21-27 C)

**Origin / Habitat:** East Africa in the Lake Malawi

**Lifespan:** 5 - 10 years

**Temperament / Behavior:** Can become territorial with males of their own species and does better with similar species with compatible water requirements.

**Compatible Tank Mates:** Other similarly sized cichlids that are have similar water requirements.

**Breeding / Mating / Reproduction:** See breeding section in the article above.

**Diet:** Primarily an herbivore but provide a variety of foods for optimal health.

**Tank Size:** A minimum of 55 gallons (~208 liters)

**Gender:** See article above. Males are usually more colorful.

**Fish Lore Forum:** [Zebra Cichlid Forum](#)

**Gallery Photos :** [Zebra Cichlid Photos](#)

Books:

The practical encyclopedia of freshwater Tropical Aquarium Fishes by Dick Mills, Gwynne Vevers, Douglas G Campbell

Fishlore members: Allie

## FRESHWATER INVERTEBRATES

### CRAYFISH, CRAWDAD

Freshwater Crayfish - You'll want to provide stable water parameters for your crayfish and provide some sort of hiding place for when they molt. They may eat smaller slow moving fish and can also get eaten by larger fish. Having multiple crawfish in your tank may cause territorial problems as well. Try to provide well oxygenated water. Use air stones to provide water surface agitation.

Crawdads are very good at getting out of the tank so you'll need to have a tight fitting hood with no possible escape points.

If you have the right setup, this invertebrate can make an interesting addition to your tank.

#### Crayfish Picture



Photos courtesy Lisa White

#### Crayfish, Crawdad Profile Facts and Care Information

**Scientific Name :** Cambaridae Camburus

**Common Names :** Crawdad, Crayfish, Crawfish

**Crayfish Care Level :** Easy

**Size :** Usually up to 3 inches (8 cm), sometimes larger

**Life span :** 2 - 5 years, possibly longer

**pH :** 6 - 8

**Temperature :** 60°F - 80°F (16°C - 27°C)

**Water Hardness** : 5° to 15° dH,

**Origin / Habitat** : Different species all over the world

**Temperament / Behavior** : May fight with other invertebrates and go after smaller fish.

**Breeding / Mating / Reproduction** :

**Tank Size** : 10 gallon minimum

**Compatible Tank Mates** : Don't keep with fish capable of eating them. May also eat smaller fish.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Food** : Omnivore

**Tank Region** : Bottom

**Gender** : Difficult to determine except when females carry the eggs.

**Author** : [Mike FishLore](#)

**Fish Lore Forum** : [Freshwater Invertebrates Forum](#)



## GHOST SHRIMP - PALAEMONETES SPP.

The Ghost Shrimp is a cool little freshwater shrimp that you may be interested in keeping if you have the right tank setup. Ghost Shrimp are sometimes called the Glass Shrimp because they have a semi-translucent body. This is a very inexpensive shrimp to purchase and should live for a year or two and sometimes even longer.

They are frequently used by fishermen as fish bait and they are considered pests by clam farmers who spend lots of money trying to eradicate them from their clam farms. For hobbyists, they can provide an interesting addition to a tank stocked with smaller, less aggressive fish species. Larger fish may find them irresistible and will just love eating them.

Ghost Shrimp need to build a burrow to feel secure so you will need to provide a sand or very small sized gravel substrate that will allow them to create a shelter for themselves. You may be able to keep multiples provided that you have a tank large enough to support multiples. You may see some aggressive behavior amongst them around breeding time.

The Ghost Shrimp is a somewhat decent scavenger and will go after all fish foods placed into the tank. Make sure they are getting enough to eat by dropping in a sinking shrimp pellet or algae wafer every once in a while.

If you have your ghosties in a tank with fishes that need treatment for diseases you will need to remove the shrimps to a separate tank while medicating. Beware especially of any medications containing copper. Run activated carbon through the aquarium filter and make sure you remove all of the medications before introducing them back into the tank.

### Ghost Shrimp Picture



Photo Credit: Tomas Hruska

### Ghost Shrimp Profile Facts and Care Information

**Scientific Name :** Palaemonetes sp.

**Common Names :** *Glass Shrimp, Grass Shrimp*

**Care Level :** Easy

**Size :** 1 - 2 inches (3 - 5 cm)

**Life span :** 1 - 2 years, sometimes longer

**pH :** 6.5 - 8

**Temperature :** 65°F - 80°F (18°C - 27°C)

**Origin / Habitat :** Found in multiple places throughout North America, mostly farm raised for the pet fish trade

**Ghost Shrimp Temperament / Behavior :** Sometimes will eat baby fish, they are usually food for other fish, sometimes will fight among themselves if the tank is too small and there are too many of them.

**Breeding / Mating / Reproduction :** If you put several Ghost Shrimp in your tank then they will mate and the female will carry small eggs in her belly which you can see. Happens without you doing anything. If you want to raise the young then you need to move the female to a separate tank before she has her babies and add the appropriate amount of aquarium salt.

**Tank Size :** 5 gallons (19 liters)

**Compatible Tank Mates :** Use caution when selecting tank mates for your Ghost Shrimp if you want to keep them. Larger fish may find them irresistible and eat them. Smaller, peaceful fish species may be able to co-exist with them.

**Fish Disease :** Freshwater Fish Disease

They are not very susceptible to disease but are susceptible to chemicals that treat fish diseases. Look for warnings stating "not good for invertebrates on the bottle". Stay away from using any copper based medications in a tank with ghost shrimps.

**Diet / Fish Food :** Omnivorous - will eat almost anything you feed it and also a good bottom feeder. This is not an effective algae eater.

**Tank Region :** Usually stays close to its burrow in the sand or gravel.

**Gender** : Hard to determine, no noticeable external differences between males and females. Females will carry the eggs.

**Author** : [Mike FishLore](#)

**Fish Lore Forum** : [Ghost Shrimp Forum](#)

## INCA SNAIL - POMACEA BRIDGESII

The Inca Snail is part of the Apple Snail family in which there are over 100 different documented species. Unlike some other snails, the Inca Snail stays relatively small and should leave your aquarium plants alone (for the most part). They do like to graze on the tank glass and any other structures in your aquarium looking for algae. If you have a sand tank bottom, they may submerge during the day and come out at night. They are fairly easy to care for but there are a few things to keep in mind when it comes to caring for this snail.

They are herbivores, so they will need a lot of greens in their diet. If your tank doesn't have a lot of algae, give your Inca Snail some algae wafers or attach a piece of lettuce to a rock. This should provide plenty of nourishment for your snails.

Avoid keeping them with fish that are known snail eaters like the fish from the loach family. Goldfish have also been known to nibble at them occasionally. Some fish will even nip at the snail's tentacles, sometimes nipping off most of it. This doesn't seem to bother the snail and often times it will grow back.

You may also need to add a calcium supplement to the tank water during weekly water changes to ensure the healthy development of their shell. Calcium can be depleted from the tank water over time and you will need to reintroduce it to the water using the calcium supplement.

### Inca Snail Picture



### Inca Snail Profile Facts and Care Information

**Scientific Name :** *Pomacea bridgesii*

**Common Names :** *Inca Snail, Gold Snail, Mystery Snail*

**Care Level :** Easy

**Size :** 2 inches (5 cm)

**Life span :** 1 - 2 years, maybe longer

**pH :** 7 - 8

**Temperature :** 65°F - 80°F (18°C - 27°C)

**Origin / Habitat :** Found in multiple places in South America

**Temperament / Behavior :** Very peaceful little snail that should not be kept with more aggressive fish species, especially loaches.

**Inca Snail Breeding / Mating / Reproduction :** They lay their eggs above the water line, so some open humid space should be left in the top part of the tank for them to access for attaching their eggs. If the eggs make it, in a couple of weeks you should have tiny snails. You can try to feed them crushed flake foods (separate them from the main tank) or let them graze on any growing algae already in the tank.

**Tank Size :** 5 gallons (19 liters)

**Compatible Tank Mates :** Avoid keeping them with known snail eaters, such as the Clown Loach and the Dojo Loach

**Inca Snail Disease :** Most issues are related to irregular shell growths due to improper or poor water quality. Missing tentacles are usually the result of a fish sampling them. The tentacles may or may not grow back depending on the situation. If the snail is isolated from fish and kept in good water conditions it may grow back. Also consider adding a calcium supplement for their shell. This supplement can be found in the saltwater fish section at the fish store.

**Diet / Fish Food :** An algae grazer. They may also sample your aquarium plants. Drop them in an algae wafer when the lights go off for the night.

**Tank Region :** If you have a sand substrate, they may burrow in the sand. Most of the time they can be found attached to a structure or tank wall grazing on algae.

**Gender :** Very difficult to determine any external differences between male and female. Females may grow to be slightly larger.

**Author :** Mike FishLore

**Fish Lore Forum :** Snail Forum

## RED CHERRY SHRIMP - NEOCARIDINA DENTICULATE SINENIS

The red cherry shrimp (RCS) is fairly hardy and adapts to a wide range of water conditions. Because of the red cherry shrimp's small size and relatively low bio load these red cherry shrimp can usually be kept in smaller confines. Larger tanks are needed to keep multiples alive and happy for the longer term though.



### Red Cherry Shrimp Profile and Care Information

**Scientific Name:** Neocaridina denticulate sinensis "red"

**Common Name:** Red cherry shrimp/cherry shrimp, RCS

**Cherry Shrimp Care Level:** Easy, good for people with small tanks. Need moss to climb on. In smaller tanks may need calcium supplement

**Size:** up to 3 cm.

**pH:** 7 - 8

**Origin:** Taiwan

**Temperature:** 70 - 80F

**Water Hardness:** 3 - 15 dkh

**Cherry Shrimp Life Span:** 1-2 years

**Temperament:** Very Peaceful

**Cherry shrimp Breeding/Mating/Reproduction:** these shrimp are very easy to breed. The females will start to turn very red and you will see yellow eggs being held in their swimlets. The females will release hormones into the water and the males will find her and mate. The females can store sperm like guppies and mollies. The female will keep the eggs and then after a while they will release the baby shrimp. The shrimp are miniature replicas of the adults. You do not need to worry about the parents eating their young. For best breeding results keep shrimp without other fish.

**Tank size:** 1 gallon or more. If you keep up with your water changes you can keep 10-15 per gallon.

**Compatible Tank Mates:** Most community fish. Do not put with bigger or aggressive fish your shrimp they will eat them.

**Diet:** Will eat biofilm from plants. Also will eat various algae types of algae and sinking pellets/extra fish food.

**Tank Region:** bottom if you have plants/decorations they will climb on them.

**Gender:** Females are reddish and males are clear

**Profile Author:** Matt6765, Gouramiguy17

**Supplements:** Calcium, Iodine (helps with molting)

**References:** [www.theshrimpfarm.com](http://www.theshrimpfarm.com)



### DWARF PUFFER - CARINOTETRAODON TRAVANCORICUS

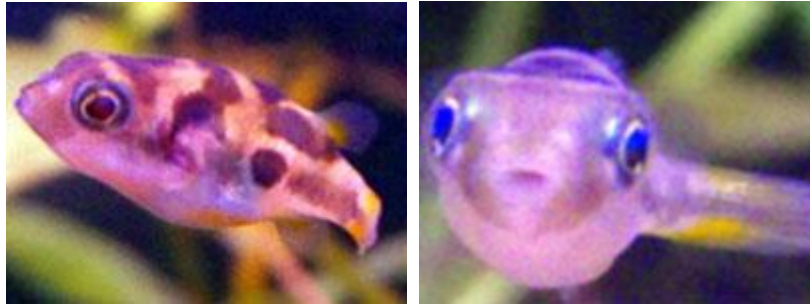


The Dwarf Puffer in many ways can be called the ideal puffer for most aquarists. The Dwarf Puffer lives in freshwater, originating from inland India. The most convenient aspect of these fish is that they are very small, only getting an inch long, and thus one can be kept in a 5 gallon tank, unlike most other puffers which require much larger aquariums. They also have an advantage in the eyes of many aquarists in that there is one fish that is pretty much guaranteed to work with them: otos. Dwarfes seem to leave otos alone and let them do their job, unlike most other fish which they pester and nip. Sometimes you can keep larger shrimp with the Dwarf Puffer, but sometimes they'll end up as a snack. It's basically a gamble with shrimp. There are very limited amounts of success keeping these puffers with other fish. Most fish are either too large and can swallow the puffers whole, and the rest will likely be nipped quite a bit and harassed. For example, as an experiment I had some cories with my dwarf puffer. They were fine for about 2 weeks, until one day I noticed that one of the cories had little chunks missing from all of his fins. Needless to say the cories moved away. I have my puffer with a ghost shrimp now, and as of yet he is still alive.

Dwarf puffers get bored easily. A good tank setup for them is five gallons per puffer, sand substrate, heavily planted, and more hiding places than puffers. When kept in groups this is particularly important as they can be quite territorial. It's also recommended to keep a ratio of 1 male to 2-3 females. Females are generally more round than the males, and, when mature, males have a dark line down the length of their belly and often have iridescent "wrinkles" on their faces. Breeding has occurred in captivity, but it doesn't happen often, and seems to occur without the aquarist doing anything to promote it. This puffer seems to be more prone to shyness than larger puffers like the Green Spotted Puffer and Figure 8 Puffer, probably just due to their small size and likelihood of being preyed upon by larger fish. They will usually eventually come around though, even if it takes several weeks or months, and show that "puffer personality" that is one of the best parts of keeping puffers in my opinion.

These dwarf puffers can be rather picky about their food. Most will accept frozen bloodworms, snails, and live blackworms. Other foods include all kinds of shrimp as well as daphnia. As with all puffers, they are very sensitive to water conditions, so 0 ammonia, 0 nitrite, and very low nitrate (preferably below 10ppm, but no more than 20ppm). Careful acclimation is also advised. If you are looking for something exciting, unique, and challenging, the dwarf puffer might be for you!

## Pictures



### Dwarf Puffer Fish Profile and Care Information

**Scientific Name :** Carinotetraodon travancoricus

**Common Names :** *Dwarf puffer, Peewee puffer, Pea puffer, Pygmy puffer, Bumblebee puffer, Indian dwarf puffer, BB puffer, Malabar puffer*

**Care Level :** Easy

**Size :** 1 inch (3 cm)

**pH :** 6.5 to 7.5

**Temperature :** 76-82 F (24 - 28°C)

**Water Hardness :** 5 - 20

**Lifespan :** probably about 5 years

**Origin / Habitat :** inland waters of India

**Temperament / Behavior :** semi-aggressive fin-nippers

**Breeding / Mating / Reproduction :** A relatively small number of spawnings have occurred. Keep a ratio of 2-3 females per male.

**Tank Size :** Provide about 5 gallons per puffer due to their territorial nature.

**Compatible Tank Mates :** Can be kept in groups if adequate space and decor are provided. Do well with otocinclus. Slow moving fish and fish with long, colorful fins will be nipped and/or harassed.

**Fish Disease :** Freshwater Fish Disease Be sure to quarantine, as they are often wild caught and often come in with parasites.

**Diet / Fish Food :** Bloodworms, snails, brine shrimp, mysis shrimp, blackworms, daphnia

**Tank Region :** Middle - they are active swimmers.

**Gender :** Female Dwarf Puffers are rounder and larger than males. Male Dwarf Puffers have dark line down the length of their bellies when mature, and sometimes have iridescent "wrinkles" on face.

#### **References:**

- Aqualog: The Puffers of Fresh and Brackish Waters by Klaus Ebert
- [www.dwarfpuffers.com](http://www.dwarfpuffers.com)

**Photos Credits:** courtesy krismoore888 (first pic) and gavin423(last two)

**About the author:** See [pinkfloydpuffer](#)

## RED EYE PUFFER FISH - CARINOTETRAODON LORTETI

The Red Eye Puffer fish is one of the more uncommon types of puffer. The Red Eye Puffer is completely freshwater, with no salt at all being needed. They are small puffers with a big personality and an even bigger attitude. They are very aggressive and the only suitable tank mates are more of their own kind or invertebrates, and some puffers are so aggressive they must be kept alone.

These puffers are very sensitive to water quality, and as puffers are very messy fish, frequent water changes and good filtration are required. Make sure that the puffer can't get sucked into the filter intake.

If you are planning to try to keep more than one of these red eye puffers together, make sure the tank is very heavily planted. Monitor the puffers closely and have a backup plan in case the puffers don't tolerate each other. Also watch at feeding time to make sure that all of the puffers are getting adequate food and that one greedy individual isn't hogging everything.

Feed enough to make the Red Eye Puffer belly chubby and round, but not enough to make the puffer look like it swallowed a marble. The belly should be back to normal size by the end of the day. If it is still distended by then, you've fed too much. If the belly is not back to normal size by the next feeding time, do not feed the puffer again until his belly is back to normal.

Live plants are a nice addition to a puffer tank. Not only do they look more natural than plastic plants, they also help to keep nitrates down, which puffers make a lot of and are also pretty sensitive to. Nitrates should be kept at 10 ppm or under and ammonia and nitrites should always be at 0.



### Red Eye Puffer Fish Profile and Puffer Care Information

**Scientific Name** - Carinotetraodon lorteti

**Common Names** - Red Eyed Puffer, Common Red Eyed Puffer

**Care Level** - Medium. This fish is sensitive to very small amounts of ammonia or nitrites and requires frequent water changes.

**Size** - 2 - 3 inches

**pH** - 6.5 - 7, but can adapt to a wide range of pH if acclimated properly. Mine lives in a pH of 8.2 quite happily.

**Temperature** - 76 - 82 F, around 78 F is just about perfect.

**Lifespan** - somewhat unknown, probably around 5 years.

**Origin / Habitat** - Asia, slow-moving rivers and ponds

**Temperament / Behavior** - Very aggressive, especially one male to another. Females are reportedly somewhat less aggressive than males, but this is still not a community fish.

**Tank Size** - 10 gallons for one, 15+ gallons very heavily planted would be required for a pair.

**Compatible Tank Mates** - This is most certainly not a community fish. The only suitable tank mate would be more of the same species, and some individuals are too aggressive for even that and must be kept alone. It may be possible to keep ghost shrimp with them but they will likely end up as dinners at one time or another.

**Breeding** - Unlikely, but has been achieved. They seem to like a lower pH of around 6-6.5 for spawning. Courtship is aggressive, and ends with the male driving the female away after she deposits the eggs. Materials like java moss are preferred to lay their eggs on. The parents should be removed once the fry are free swimming. The fry are reportedly picky eaters, with some breeders being successful with infusoria or micro-worms.

**Fish Disease** - Not particularly prone to any specific disease, but like all puffers, they are especially sensitive to water quality. Also, no medication containing copper should ever be used.

**Feeding / Diet** - It is extremely rare for them to accept flakes, and even if they do they won't be getting proper nutrition. They should be fed frozen bloodworms, daphnia, and small shellfish/shrimp. Water snails should also be fed to keep the teeth from getting too long, but make sure the snails are not too big or the puffer will eat the soft body only without touching the shell.

**Tank Region** - Middle/bottom, except at feeding time.

**Gender** - Females have a much more intricate and lacy pattern than the males. Males also may have a red stripe on the belly, although this may only be noticeable during spawning.

**Profile and Photo Credits** - [MaddieLynn](#)

## GLASSFISH

### INDIAN GLASSFISH



Obviously named for its translucent flesh, the glassfish is an interesting, slightly odd addition to the right aquarium. Glassfish are a schooling fish, and prefer to be kept in groups of five or more. They can be kept in smaller numbers, but they will be shy and will spend much of their time hiding. Even when kept in larger numbers, they tend to not be aggressive, though they can get to be very bold and energetic.

Glassfish have a reputation for being difficult to keep alive, but this belief largely stems from the myth that they require brackish water to survive. In nature, these fish live in standing water such as bodies created from dammed mountain streams, not estuaries or other areas of brackish water. If they are kept in true freshwater, they seem to be fairly hardy fish, no more difficult to keep than many tetras.

I am currently unaware of the difficulty of breeding glassfish in the aquarium. In the wild, they breed prolifically during the rainy season. If the tank's water temperature is raised to 85° and the fish are fed a healthy diet of high protein food, they may be induced to breed in an aquarium.

One particular note about glassfish is that, due to their transparent flesh, they are often injected with fluorescent dye. The result is a glassfish with fluorescent dots floating in its body. Most of these fish do not survive the dyeing process, and those that do are four times as likely to develop certain viral infections as undyed glassfish. For more information on this, check out the article on dyed fish.

#### Glassfish Profile and Glass Fish Care Information

**Scientific Name:** *Parambassis ranga* (originally referred to as *Chanda ranga*)

**Common Names:** Glassfish, Glass Perch, Siamese Glassfish, Glass Fish

**Care Level:** Moderate

**Size:** 3 inches

**pH:** 6.5 - 7.5

**Temperature:** 68° - 86°

**Water Hardness:** 7 - 19 dGH

**Lifespan:** Unsure

**Origin:** Southern Asia from Pakistan to Malaysia

**Temperament/Behavior:** Very energetic yet peaceful

**Breeding / Mating / Reproduction:** To induce spawning they need slightly brackish water conditions with elevated temperatures. They may place eggs on plant leaves. Raising the fry is another story all together. Considered difficult.

**Tank Size:** A few specimens could likely be kept in a species-only 10g. 20g and at least five glassfish is preferable.

**Compatible Tank Mates:** Many. Would likely make excellent dither fish in groups of five or more. Would also make good "target" fish for species that get aggressive during mating. Glassfish are very fast swimmers, and also seem to be playful. Obviously, avoid predators large enough to eat the glassfish. Purely aggressive tank mates may not be the best choice, though glassfish may do well in a tank with semi-aggressive fish and plenty of hiding places.

**Fish Disease / Illness:** Freshwater Fish Disease page includes symptoms, diagnosis and treatment info. Only painted glassfish seem to be particularly susceptible to any particular disease. Painting seems to encourage ich and fin rot immediately after painting, and makes the fish more likely to develop Lymphocystis, a viral infection that causes white cysts on the body and fins, throughout its life.

**Food / Diet:** Frozen or fresh, mostly carnivorous diet. Generally do not eat dry food, according to several sources. That being said, I have fed my glassfish nothing but flakes and freeze-dried bloodworms, and they are always eager to eat.



**Tank Region:** Supposedly mid to bottom. This may be a result of lethargy induced by brackish water. In purely freshwater tanks, they range across the entire depth of the aquarium.

**Gender:** Males develop dark edge to their dorsal fin.

## GOURAMIS

### BLUE GOURAMI (TRICHOGASTER TRICHOPTERUS)

The Blue Gourami (*Trichogaster trichopterus*) is also referred to as the Three Spot Gourami and sometimes even the Opaline Gourami. This gourami is called the three spot because of the three spots on its body. The first two are visible (one on the middle of the body and one near the caudal fin) and the third spot is the eye. This fish is like the Betta Splendens in that it needs access to the water surface for using its specialized labyrinth organ in case of low oxygen levels. They can become aggressive and territorial with other tank mates and may be even more aggressive with other male blue gouramis.

Once acclimated to your tank, they can be fairly hardy and can grow to a size of 6 inches (15 cm).

Even though many of the available Blue Gouramis are tank raised it's always a good idea to keep any new fish in a Quarantine Tank for a few weeks for monitoring before introducing them into your main tank.

The Blue Gourami will accept smaller fish food including flakes, frozen, freeze dried and live foods.

#### Gourami Picture



#### Blue Gourami Profile Facts and Care Information

**Scientific Name :** Trichogaster trichopterus

**Common Names :** *Three Spot Gourami, Opaline Gourami*

**Care Level :** Easy

**Size :** Up to 6 inches (15 cm)

**pH :** 6 - 8

**Temperature :** 74°F - 82°F (23°C - 28°C)

**Lifespan :** 5 years or longer

**Origin / Habitat :** Southeast Asia

**Temperament / Behavior :** May be aggressive with males of the same species and with females of the same species after spawning. They may become skittish with larger tank mates.

**Blue Gourami Breeding / Mating / Reproduction :** They have been bred in captivity and are egg layers. Breeding behavior is similar to the Betta Splendens. Males build a bubble nest and try to initiate spawning. Females should be removed after spawning and the male will tend to the eggs until they hatch.

**Tank Size :** 20 gallon minimum

**Compatible Tank Mates :** They can be relatively peaceful if kept with similar sized and larger tank mates. You may have issues when keeping them with other males.

**Fish Disease :** [Freshwater Fish Disease](#)

**Diet / Fish Food :** An omnivore - provide a varied diet with live food, frozen food and they should accept flake food.

**Tank Region :** Mostly top, sometimes middle

**Gender :** Dorsal fin on males is longer and pointed while it is shorter and rounded on females.

**Fish Lore Forum :** [Blue Gourami Forum](#)

**Author :** [Mike FishLore](#)



## DWARF GOURAMI - COLISA LALIA

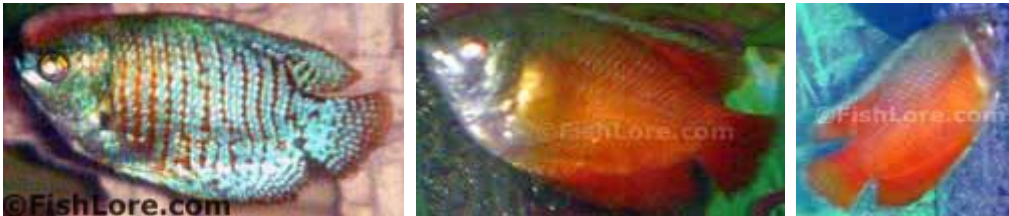
Popular Common Names: *Blue Dwarf Gourami*, *Sunset Gourami*, *Powder Blue Gourami*, *Neon Dwarf Gouramis*

The Dwarf Gourami originates in the waters of India and is not only beautiful but they can be particularly hardy as well. The male Dwarf Gourami is more colorful while the females are less colorful. Usually the female Dwarf Gourami is gray in appearance. There are a couple of color varieties including the Blue and the Flame Red.

They make a great addition to a fully cycled community tank and are easy to care for in general. Some hobbyists find that these dwarf gouramis tend to be a bit too aggressive with conspecifics and choose to keep one to a tank. They should accept most fish food including flakes, freeze-dried, frozen and live foods.

If you notice the coloration on your dwarf gouramis starting to fade, try supplementing their diet with freeze dried blood worms or live foods once in a while. They are not picky eaters.

### Dwarf Gourami Pictures



### Dwarf Gourami Profile Facts and Care Information

**Scientific Name :** Colisa lalia

**Care Level :** Easy, good for freshwater beginners with a tank that has completed the aquarium nitrogen cycle.

**Size :** 3 inches (8 cm)

**pH :** 6 - 8

**Temperature :** 77°F - 82°F (25°C - 28°C)

**Water Hardness :** 5° to 20° dH

**Life span :** 3 - 4 years

**Origin / Habitat :** India

**Dwarf Gourami Temperament / Behavior :** Mostly peaceful and hardy, they are good fish for beginners.

**Dwarf Gourami Breeding / Mating / Reproduction :** Can be difficult. They build bubble nests for their eggs.

**Tank Size :** 20 gallon or larger.

**Dwarf Gourami Compatible Tank Mates :** Many, given their usually peaceful nature. They may become slightly territorial if placed in a smaller tank with other Dwarfs.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Dwarf Gourami Diet / Fish Food :** Will eat flake, freeze dried and live foods. Vary their diet for optimum health.

**Tank Region :** Middle to top

**Gender :** Easy to determine. The male is more colorful while females are usually gray.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Dwarf Gourami Forum](#)

## GIANT GOURAMI (OSPHRONEMUS GORAMY)



The Giant Gourami (*Osphronemus goramy*) is not really recommended for most hobbyists since the majority of home hobbyists don't have aquariums large enough to keep these giant gouramis. You're looking at a tank in the several hundreds of gallons at minimum to keep these fish. They can get up to around 27 inches as adults, with the more common sizes around 17 inches or so. They grow fast too.

The Giant Gourami is not a picky eater. It will accept most tropical fish foods including larger pellet based foods as well as crickets, worms, small frogs, smaller fish, etc. They will also eat vegetables like peas which may help with digestive issues.

### Giant Gourami Profile Facts and Care Information

**Scientific Name :** *Osphronemus goramy*

**Common Names :** *Giant Gourami*

**Care Level :** Easy

**Size :** to 27 inches (70 cm), common sizes are around 17 inches (45 cm) (ref:fishbase)

**Water Parameters :** pH 6.5 - 8 | Temperature range 68°F - 86°F (20°C - 30°C)

**Lifespan :** long lived, 10 plus years

**Origin / Habitat :** Asia - lives in swamps, lakes, canals and river systems

**Temperament / Behavior :** May eat smaller fish and may bully other fish and may fight with other giant gourami

**Giant Gourami Breeding / Mating / Reproduction :** Bubble nest builder. Male will place eggs into the bubble nest after spawning and guard it until hatching. Female should be removed from the breeding tank after eggs are in the nest. Eggs will hatch within a day or two.

**Minimum Tank Size :** 200 gallons plus

**Compatible Tank Mates :** Larger fish species or fish big enough not to be harassed or on the menu. Like minded, large bodied fish which means an even larger tank if you want to keep them in with other large species.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** An omnivore - they eat smaller fish, insects, worms, frogs, weeds. A larger tropical pellet food can form their primary diet but supplement with live/thawed foods.

**Tank Region :** Middle region

**Gender :** Male's dorsal fin is pointed, males may become darker color during spawning

**Photo Credit :** A-kun-a (wiki)

**Author :** Mike FishLore



## KISSING GOURAMI - HELOSTOMA TEMMINCKI

The Kissing Gourami gets its name from the way it will kiss other gouramis and other fish in your tank. They are not kissing but they are in fact acting aggressive and having a showdown. When the Kissing Gourami does this it means that one is trying to establish dominance over the other.

The Kissing Gourami can get quite large, often 10 - 12 inches in length. We do not recommend them for the beginner because of their potential adult size and because they can become very territorial in a community tank. They will often chase your other fish around the tank, especially after food has entered the aquarium. This behavior can get very annoying.

They are not picky eaters and will go after flakes, pellets, frozen, freeze dried and live foods.

### Kissing Gourami Pictures



### Kissing Gourami Profile Facts and Care Information

**Scientific Name :** Helostoma temmincki

**Common Names :** *Kissing Fish, Pink Kissing Gourami*

**Care Level :** Easy to Moderate

**Size :** Up to 12 inches (30 cm)

**pH :** 6 - 8

**Temperature :** 72°F - 82°F (22°C - 28°C)

**Water Hardness :** 5° to 20° dH,

**Lifespan :** 5 - 7 years

**Origin / Habitat :** South East Asia

**Kissing Gourami Temperament / Behavior :** They can be territorial at times and will fight with their mouths. We've found that it is good to get a pair so that when they are feeling aggressive they will chase each other around instead of the other tropical fish.

**Kissing Gourami Breeding / Mating / Reproduction :** Very difficult to breed because they require large tanks.

**Tank Size :** 50 gallon or larger.

**Kissing Gourami Compatible Tank Mates :** Because of its potential adult size and because it can become territorial, use caution when selecting tank mates.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Will take many types of foods, including flakes, pellets, freeze dried and especially live foods.

**Tank Region :** Middle and Top

**Kissing Gourami Gender :** Can not be determined by external features.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Kissing Gourami Forum](#)

## PARADISE FISH (MACROPODUS OPERCULARIS)



The Paradise Fish (*Macropodus opercularis*) is also known as the Paradise Gourami. It gets to about 4 inches in size when fully grown and can be aggressive with other gouramis. The fins and colors on the males are super colorful and it makes them easy to differentiate from the females. Finding suitable tank mates might pose problems and it is not really recommended to introduce them into a community type tank setup. They are one of the more aggressive gourami species.

Feeding them shouldn't be a problem. They will accept flake foods, pellets, live or thawed insects, brine shrimp, etc.

### Paradise Fish Profile Facts and Care Information

**Scientific Name :** *Macropodus opercularis*

**Common Names :** *Chinese Fighting Fish, Paradise Fish, Paradise Gourami*

**Care Level :** Easy

**Size :** to 4 inches (10 cm)

**Water Parameters :** pH 6 - 8 | Temperature 74°F - 82°F (23°C - 28°C)

**Lifespan :** 5 years or slightly longer

**Origin / Habitat :** Southeast Asia, China, can settle in water ways with very low oxygen content

**Temperament / Behavior :** May eat smaller fish and will fight with other male paradise fish. May fight with other gourami species as well and chase fish with long fins.

**Paradise Fish Breeding / Mating / Reproduction :** Bubble nest builder. Male will place eggs into the bubble nest after spawning and guard it until hatch.

**Tank Size :** 30 gallon minimum

**Compatible Tank Mates :** Larger tetras, some of the more peaceful bottom dwelling catfish, corydoras, some of the less aggressive cichlids, etc. They may go after fish with long fins like the freshwater angelfish.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** An omnivore - they may eat smaller fish species, insects, worms, brine shrimp. Should accept most tropical fish flake food, pellets, etc.

**Tank Region :** Middle to top

**Gender :** Males have much more color and longer fins than females.

**Author :** Mike FishLore

**Photo Credit :** A-kun-a (wiki)

## PEARL GOURAMI (TRICHOGASTER LEERI)

The Pearl Gourami has many different common names such as the Lace Gourami, the Leeri Gourami, etc. They are all referring to the same fish - the Pearl Gourami - *Trichogaster leeri*.

For a gourami, the Pearl Gourami is considered peaceful and will share a tank with most community fish types. However, male pearls may fight with each other, especially if there are females in the tank and it's spawning time. Be ready to use a tank divider or take the other males back to the store and only keep one male with the females in your tank. Even after doing this, the male may still harass the other female pearl gouramis. Take the appropriate action if this happens.

They originate from swampy areas in Asia where the water can be on the acidic side of the pH scale. While it would be good to keep them in similar conditions you should know that they will tolerate a wide range of water parameters. They are a very nice looking fish with tons of tiny white "pearl" shapes dotting its body. There is a horizontal black bar that runs the length of the Pearl Gourami's body. Males are easy to distinguish from females because they will develop a red breast and their dorsal fins will be longer.

Feeding your Pearl Gourami should pose no problems since they will eat nearly every sort of fish food you put in the tank. Give them a quality flake food and supplement with live or frozen freshwater fish cubes. Feeding live foods becomes even more important if you're planning on breeding this beauty. If you've successfully bred livebearers you should find that this fish is not that much harder to breed assuming that you can acquire a male and female. Females seem to not be as commonly available at the fish store as the males.

### Pearl Gourami Pictures



Photo Credit: Simon Lawrance



Photo Credit: Kevin on FishLore Forum

### Pearl Gourami Profile Facts and Care Information

**Scientific Name :** Trichogaster leeri

**Common Name :** Pearl Gourami, Lace Gourami, Diamond Gourami, Leeri Gourami, Mosaic Gourami

**Care Level :** Easy and hardy, good for freshwater beginners

**Size :** 5 inches (13 cm)

**pH :** 6 - 8

**Temperature :** 77°F - 82°F (25°C - 28°C)

**Water Hardness :** 5° to 15° dH,

**Life span :** 3 - 4 years and longer

**Origin / Habitat :** Asia, Thailand, Indonesia

**Pearl Gourami Temperament / Behavior :** Mostly peaceful but they may scrap with other gouramis. Males seem to be more aggressive than females.

**Breeding / Mating / Reproduction :** The Pearl Gourami is a bubble nest builder. Increase the tank water to around 82°F (28°C), lower the water level a little and condition them with good foods (live foods and/or brine shrimp) for a couple of weeks. The male will build a bubble nest and then he will try to get the female to come over to his nest where he will wrap himself around her and she will release the fertilized eggs into the nest. He will then guard the nest. The eggs should hatch within a day or two and the fry should be swimming about 5 days later. Make sure you have

fry foods ready - liquid fry food works well. You will want to move them to a grow out tank where you can perform frequent (daily) partial water changes.

**Tank Size :** 29 gallon minimum

**Compatible Tank Mates :** Pearl Gourami seem to be peaceful most of the time, except for when the male pearls go after each other. Watch for signs of aggression and remove or separate as needed. They may also bicker with other gouramis.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** This is not a picky fish. They will eat flakes just as quickly as they'll eat live and frozen foods.

**Tank Region :** Middle to top

**Gender :** Relatively easy to determine. The male will develop a red breast and the male's dorsal fin is longer. The red breast on the males should become even more visible as it nears spawning mode.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Pearl Gourami Forum](#)

## SPARKLING GOURAMI - TRICHOPSIS PUMILA



The Sparkling Gourami, or Pygmy Gourami as it is called sometimes, is one of the smallest members of the labyrinth fish family. The body of this gourami resembles that of a female or juvenile Betta and it's definitely smaller than we would expect in a Gourami. The reason why this tiny anabantid is called "Sparkling" is because of its coloration; his body and eyes appear iridescent under adequate lighting.

The Sparkling makes a great addition to any successful, established and cycled fish tank. The Sparkling Gourami is a delicate fish however, and even though it is easy to keep, water parameters should be watched closely. This tiny fish is a good candidate for a small tank, preferably well planted and with plenty of hiding spaces. The Sparkling Gourami is a shy little fish, and should not be kept with aggressive or considerably bigger tank mates. Contrary to the other types of gouramis, the Sparkling may be kept in multiple numbers in the aquarium with little aggression and does not require to be kept in schools.

### Sparkling Gourami Profile and Care Information

**Scientific Name :** Trichopsis Pumila

**Common Names :** *Sparkling Gourami, Pygmy Gourami*

**Care Level :** Medium - Difficult since it needs a well-established tank with plenty of hiding spaces and non-aggressive tank mates.

**Size :** 1.5 inches

**pH :** 7.0

**Temperature :** 76-82F (24-28C)

**Lifespan :** 3 years or more



**Origin / Habitat :** Cambodia, Vietnam, Thailand (Southeast Asia) in small ponds and ditches.

**Temperament / Behavior :** Peaceful and often shy if not provided with enough hiding spaces and plants.

**Tank Size :** 5 gallons and above, the larger the better.

**Compatible Tank Mates :** Non-aggressive and small fish species. Since the Sparkling is so peaceful it might become stressed and overly timid with aggressive tank mates; it might become food for larger fish as well.

**Breeding :** Males will produce and guard the bubble nest.

**Fish Disease :** [Freshwater Fish Disease](#)

**Diet / Fish Food :** Omnivore, but could use a veggie meal every once in a while.

**Tank Region :** Bottom- mid dweller

**Gender :** The sex of the sparkling will become notorious during mating rituals, which are similar to those of other gouramis and bettas.

**Photo Credit** Zikamoi - wikipedia

**About the Author :** See [Alessa's Member Spotlight](#)

## HATCHETFISH

### COMMON HATCHETFISH - GASTEROPELECUS STERNICLA



The common hatchetfish gets to about 1.5 inches in size and likes to be kept in a small school of 6 or more. A 20 gallon aquarium that is fully cycled with peaceful tank mates and lots of top level swimming space would be good to start with. They will eat small insects, worms, flake food, thawed and live foods. You also need to have a good fitting hood (or lower the water level) when keeping hatchetfish. Take your time when introducing them to your tank.

Spend an hour or more doing a slow drip acclimation and feed them a couple of times per day and they will reward you with lots of activity.

#### Common Hatchetfish Profile Facts and Care Information

**Scientific Name :** *Gasteropelecus sternicla*

**Common Names :** Common Hatchetfish, River Hatchetfish

**Care Level :** Medium, slowly acclimate them to your tank.

**Size :** Up to 1.5 inches (3.5 cm)

**pH :** 6 - 7

**Temperature :** 73°F - 80°F (23°C - 27°C)

**Water Hardness** : 4° to 15° dH

**Lifespan** : 2 - 5 years

**Origin / Habitat** : South America, Amazon River, Peru and Venezuela - found in slow flowing creeks or swamps

**Temperament / Behavior** : Does well with other species, needs to be kept in groups of 6 or more

**Hatchetfish Breeding / Mating / Reproduction** : No breeding info at this time.

**Tank Size** : 20 gallon or larger, needs to be kept in groups

**Compatible Tank Mates** : Many, given their peaceful nature.

**Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Will eat flakes, live, thawed and freeze dried foods. In the wild they may jump out of the water to get small insects.

**Tank Region** : Top of the tank, surface dweller.

**Gender** : The females are larger than the males.

**Similar Species** : Hatchetfish

Marble Hatcherfish

**Fish Lore Forum** : Hatchetfish Forum

**Photo Credit** : Neale Monks

**Author** : Mike FishLore

## MARBLE HATCHET FISH - CARNEGIELLA STRIGATA

The marble hatchet fish is a truly unique looking fish that will always hang out at the top of your tank. In general, hatchet fish do not have the reputation as being one of the hardier species to keep in the home aquarium, but the marble hatchet fish seems to do better than the other hatchet fish. Make sure that you slowly acclimate Hatchet Fish to an established tank that has completed the aquarium nitrogen cycle. They really do well in a small school of 6 or more and with peaceful tank mates.

Marble Hatchet Fish are accomplished jumpers so you will also need a hood that has no escape points that will give them the opportunity to jump out. Keeping them with skittish fish may increase the chances of them deciding to jump out.

Many of the hatchet fish are wild caught so you should plan on using a quarantine tank for a few weeks for monitoring before introducing them into your main tank.

This Hatchetfish will accept all sorts of tropical fish food, including flakes, frozen and freeze dried foods and definitely live foods.

### Marble Hatchet Fish Picture



### Marble Hatchet Fish Profile Facts and Care Information

**Scientific Name :** Carnegiella strigata

**Common Names :** *Marbled Hatchet Fish*

**Hatchetfish Care Level :** Medium, need to slowly acclimate them to your tank. Will probably not make it through an aquarium nitrogen cycle.

**Size :** Up to 2 inches (5 cm)

**pH :** 5.5 - 7, prefer water slightly on the acidic side

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 4° to 12° dH

**Marble Hatchet Fish Lifespan :** 2 - 5 years

**Origin / Habitat :** South America, Amazon River

**Marble Hatchet Fish Temperament / Behavior :** This is a very peaceful tropical fish and best kept in schools of 6 or more.

**Hatchetfish Breeding / Mating / Reproduction :** Hatchet Fish can be difficult to breed in the home aquarium. They are egg layers and the adult fish must be removed after dropping the eggs. Provide a lower pH (peat moss) and very soft water (3° to 5° dH). Feed the fry brine shrimp.

**Tank Size :** 10 gallon or larger.

**Marble Hatchet Fish Compatible Tank Mates :** Many, given their peaceful nature. Avoid keeping with tropical fish large enough to eat them or fish that may bother them, such as Tiger Barbs.

**Disease :** Freshwater Fish Disease - always a good idea to use a quarantine tank.

**Diet / Fish Food :** Will go after flakes, live and freeze dried foods. They really seem to enjoy mosquito larvae which can sometimes be found in frozen cube form at your local pet store.

**Tank Region :** Top of the tank, surface dweller.

**Marble Hatchet Fish Gender :** The female marble hatchet may have a thicker belly, otherwise can be difficult to determine.

Common Hatchetfish

**Fish Lore Forum :** Hatchetfish Forum

**Author :** Mike FishLore

## KILLIFISH

### KILLIFISH - NOTHOBRANCHIUS SP. - NOTHOS KILLIFISH

*Nothobranchius sp.*



The Nothobranchius killifish come from East Africa. They are annual fish, meaning killifish live for around a year. This is because in the wild, the killifish habitat consists of temporary pools. These pools are created by seasonal rains and dry up when drought comes. Thus the killifish die having left behind their eggs buried in the river/lake bed. During the dry period the eggs develop and when the rain returns, filling up the pools again, the embryos hatch. Because of the unpredictable weather, the fry grow fast, reaching maturity within a few weeks and reproduce. Not all killifish survive but this does not end the population. The eggs go through several distinct stages in their growth, including resting periods called diapause. Some of these embryos will either stop for a while, or at least slow down significantly in their development. Because of this some will not be ready to hatch for some time after their siblings and in this way there are always eggs ready to hatch whenever the rains come.

The descriptions on these fish vary greatly. As general description goes, they have slightly compressed elongated bodies with the anal and dorsal fins set well back and wide caudal fins with a round edging. Their coloration varies from pink, white, silver, maroon, red to orange, yellow and many other colors. The East African annual fish are thought to be one of the most beautiful fish in the world. More often than not, the colors are combined, creating beautiful coloration. Among the different varieties of killifish there is the, Guentheri from Zanzibar Island, rachovii from Mosambique and the Eggersi from Tanzania.

The Nothobranchius killifish prove to be interesting to fish hobbyists. Caring for the Nothobranchius killifish is not all that hard but they do require a little extra attention than the common Aphyosemion Killifish species.

A minimum aquarium of 10 gallons (37.8 liters) is required for every three killifish of any this species. They prefer soft water, with a pH of 6.0 to 6.5 and a water temperature of 70-80 F (21-

27 C). Decorations, including live plants and rocks, set up in a way that would provide shelter when needed helps in making an ideal home for these fish.

They are considered to be peaceful fish and can be kept with other killifish as well as other fish that tolerate the same water conditions. More than one male is not advised to be kept in a 10 gallon aquarium as they tend to fight. If more than one male is to be present in the aquarium then it should be 20 gallons (75.7 liters) or more. The fish of the Nothobranchius species grow between 1.5 - 2.5 inches, depending on the specific species.

A wide variety of food is accepted, although small live food, like brine shrimp and grindal worms is much more preferred.

To identify the genders, notice that the male is the more colorful one and the female is more of a silvery color or sometimes, with less color and duller than the male.

To breed these killifish, try and imitate their natural habitat the best you can. This, as in other fish species, helps encourage spawning. Using peat for substrate in the aquarium, they will breed and bury their eggs in it, as they will with mud that is used in the wild. The pair will dive in to the substrate and the male will press the female against a hard surface of the peat, in this way releasing the sperm and eggs. This process will be repeated a couple of times within a few minutes, resulting in hundreds of eggs being laid. The peat should be taken out and left to dry. Not too dry or the eggs will die, just enough to leave the peat damp. Thereafter place it in an air tight package (so that it cannot get any dryer) and leave it to stand for about three months.

By doing this you will be mimicking the drought period in their natural habitat. It is in this dry period which the killifish eggs will develop. When the "drought" is over the aquarium in which the fry is to be raised should have peat for substrate and java moss for cover. The peat should be kept wet in the tank for a week or so and whatever fry it contains removed. The peat should again be taken out and dried for a week. Thereafter wet again for a week or so and by this manner the process should be repeated until you are positive that there are no eggs left. It takes a long time and can be a hard process. Any questions can be put to Tom on the Fishlore forum.

### Killifish Profile and Killifish Care Information

**Scientific Name:** Nothobranchius sp.

**Common Name:** Killifish, African Annual Fish

**Care Level:** easy to medium

**Size:** between 1.5 - 2.5 inches (4 - 6 cm)

**pH:** 6 - 6.5

**Temperature:** 70-80 F (21-27 C)

**Origin / Habitat:** Africa - Malawi, Mozambique, Zimbabwe and South Africa. They live in small pools that come with the rains.

**Lifespan:** Most likely longer lived in aquariums, 1 - 2 years possibly longer

**Temperament / Behavior:** Can become territorial with males of their own species, but are usually peaceful with most other tank mates.

**Compatible Tank Mates:** Other similarly sized fish species that are have similar water requirements.

**Breeding / Mating / Reproduction:** See breeding section in the article above.

**Diet:** A variety of foods should be offered including brine shrimp and grindal worms.

**Tank Size:** A minimum of 10 gallons (~38 liters)

**Gender:** See article above. Males are usually more colorful.

**Fish Lore Forum:** [Killish Forum](#)

**Gallery Photos :** [Killifish Photos](#)

**References / More Info / Recommended Reading:**

Photo Credit: Andreas Wretstrom

More Info On the Web:

- [www.aquaticcommunity.com](http://www.aquaticcommunity.com)

- [www.thebomb.clara.co.uk](http://www.thebomb.clara.co.uk)

- [http://aquarium-fish.biz/Common\\_Tropical\\_Fish/Killifish/nothobranchius.htm](http://aquarium-fish.biz/Common_Tropical_Fish/Killifish/nothobranchius.htm)



## LIVEBEARING FISH

### ENDLERS LIVEBEARER - POECILIA WINGEI

*Poecilia wingei*



The Endler's Livebearer is thought to be just a color variant of the common guppy (*Poecilia reticulata*), but it is under debate whether that is true or not. The Endlers Livebearer is a really nice looking livebearer that the true wild strain is almost extinct, if not already is. The males of this species is a fluorescent color while the females are a plain silver or grey, but that is the true strain. It is also sometimes considered a dwarf version of the guppy since this fish gets to be only about 1-1.5" while the guppy gets to about 2".

Since this fish is so close to the guppy, it is kind of hard to write something original for it, but it is also different in the fact that it comes from a different area of the world and it is a different adult size. Other than that, the breeding of them is the same, which is the male Endler gets the female pregnant and then the female holds the embryos until they are developed enough and then the female gives birth to fully developed young after 20-40 days. Then the fry will grow up normally if they are given lots of protein enriched food as well as some vegetable matter, like algae wafers every couple of days. The best food for new fry are either live baby brine shrimp, or frozen baby brine shrimp, as it is small enough for them to eat and grow big on the food.

They prefer a tank that has a neutral pH and soft-moderately hard water. The tank should be planted, with either live plants or fake, with the temperature 75-85°F (24-29°C). To get them to show the best colors is by having two females to every male, and by feeding them a variety of foods, from frozen foods, to flake foods, to live foods. But make sure to only feed them foods that will be able to fit in their small mouths. If they are given what they need for food, and what they like for a home, they will be great fish to keep and watch as they grow and have many fry and watch the cycle of life.

The Endler is a great fish to keep as long as it is in a tank with peaceful community fish. Mostly fish that won't eat the fins or the fish is a good rule when it comes to keeping virtually and fish. But like most fish, these fish do better in a tank on their own, so they can breed and multiply all on their own, without any disturbance from other fish eating the fry.

## Endlers Livebearer and Livebearer Care Information

**Scientific Name :** *Poecilia wingei*

**Other Common Names :** Endler Livebearer

**Care Level :** Easy to moderate **Size :** 1.5 inches (4cm)

**pH :** 7 - 7.5

**Temperature :** 75 - 85°F (24 - 29°C)

**Water Hardness :** Soft to moderately hard water

**Origin / Habitat :** Laguna de Los Patos, Venezuela

**Lifespan :** 3 - 5 years

**Temperament / Behavior :** Peaceful, great for established community tanks

**Breeding / Mating / Reproduction :** Livebearers and not hard to breed. Very similar to guppies, read the [breeding guppies](#) article.

**Tank Size :** 10 gallon or larger.

**Compatible Tank Mates :** Many, as long as they aren't being housed with fish that will nip the fins or eat the fish, like [tiger barbs](#), some [tetras](#), various other [barbs](#), etc.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Flake food, frozen food, and live food. Vary the diet for excellent health, and color.

**Tank Region :** Middle to top

**Gender :** The males are a fluorescent color, while the females are a silver color.

**Gallery Photos :** [Livebearer Photos](#)

Photo Credit: Silvana Gericke



## GUPPY, FANCY GUPPY - POECILIA RETICULATA

The Guppy is perhaps the most popular freshwater tropical fish species. A great tropical fish for freshwater aquarium fish beginners, the Guppy is a very hardy tropical fish that is also a very prolific breeder. The male guppy is easy to distinguish from the female guppy because the male is usually more colorful with extremely colorful and large caudal fins (tails). The female is usually larger, thicker bodied, with less color and a smaller caudal fin (tail).

They are livebearers which means that the babies are free swimming at birth. At each birth, the female can have anywhere between 4 and 60 or more babies. If left in a community tank, the guppy fry will be quickly eaten if not secured in a breeding net or breeder's box. Sadly, even the guppy parents will partake in the baby guppy feast.

Please be responsible and have a plan for what to do with the guppy fry. If you're not interested in breeding them they should do just fine when kept as all males or all females. Mix the sexes and you will most likely have babies. If knowing that the larger fish in the tank are having a feast (as they would in the wild) on the baby guppies bothers you then only keep all males or all females. You may sometimes see some aggression amongst the males but nothing too out of hand.

Also, keep in mind that female guppies can be pregnant when you buy them from the store. Look for the gravid spot by the anal vent or a bulging in the belly area.

They will accept most fish food including vitamin enriched flakes, frozen, freeze dried and live foods. Try to give them a variety of foods for optimum health and coloration. Feeding them live or frozen foods every once in a while should do wonders for their activity levels and general wellbeing.

See the [Guppy Care Sheet](#) on the forum for even more details on keeping guppies.

### Guppy Pictures



Guppy, Fancy Guppy Fish Profile Facts and Care Information

**Scientific Name :** *Poecilia reticulata*

**Common Names :** *Guppy, Fancy Tail Guppy, Millions Fish, Rainbow Fish*

**Guppy Care Level :** Easy, good for freshwater beginners when you have only one sex. This fish will breed easily in your tank if you plan on keeping males and females in the same tank.

**Size :** 2 inches (5 cm)

**pH :** 7 - 8

**Temperature :** 66°F - 84°F (19°C - 29°C)

**Water Hardness :** 10° to 20° dH,

**Guppy Lifespan :** 3 - 5 years

**Origin / Habitat :** Central America

**Guppy Temperament / Behavior :** This is a peaceful and hardy fish that is good for beginners.

**Guppy Breeding / Mating / Reproduction :** Livebearers and not very hard to breed. Parents will eat their young if not separated. Read the breeding guppies article for more information.

**Tank Size :** 10 gallon or larger.

**Guppy Compatible Tank Mates :** Many, given their peaceful nature.

**Guppy Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Give your Guppy flakes, freeze dried and live foods. Vary their diet for optimum colors and health.

**Tank Region :** Middle to top

**Gender :** Easy to determine. The male will have the larger, more colorful tails.

**Author :** Mike FishLore

**Fish Lore Forum :** Guppy Forum

## MOLLIES, MOLLY FISH

[Member's Molly Fish Photos](#)

[Molly Fish Forum](#)

[Molly Caresheet](#)

The Molly is a tropical fish that prefers a little salt in their water. A teaspoon of aquarium salt per 5 gallons of water will go a long way in helping them. You may also see them in saltwater tanks from time to time. There is a local reef store here that keeps black mollies in a regular saltwater tank with similar sized species. The molly is a very attractive tropical fish that comes in many different colors such as orange, green and black. Some of the more popular varieties include the sailfin, balloon and the dalmation.

The Molly fish is a live bearing tropical fish that can be fairly easy to breed. For many aquarists the biggest problem is not getting them to breed but stopping them from breeding. If left in a tank with other adult fish, the baby mollies will get eaten.

Mollies will eat flakes, frozen, freeze dried and definitely live foods.

**Molly Fish Picture**



[Mollies, Molly Fish Profile Facts and Care Information](#)

**Scientific Name :** *Poecilia sphenops*

**Common Names** : *Black Molly, Lyretail, Sailfin, Liberty, Mollie, Pointed Mouth, Short Finned, Mexican, Golden, Piebald, Ghost Pearl, Gold Dust, Red Sunset, Dalmation, Ballon, etc.*

**Care Level** : Easy, very good for freshwater beginners if keeping a single sex. Keeping both sexes could cause problems since this fish is such a prolific breeder.

**Size** : 2 to 4 inches (5 - 10 cm) depending on the species

**pH** : 7.5 - 8.5

**Temperature** : 70°F - 82°F (21°C - 28°C)

**Water Hardness** : 10° to 25° dH

**Origin / Habitat** : Central America

**Life Span** : 3 - 5 years

**Molly Fish Temperament / Behavior** : Peaceful

**Molly Fish Breeding / Mating / Reproduction** : These are livebearers so it is fairly easy. Adding a little aquarium salt will help. Read the breeding guppies article for more information. That article talks about guppies and swordtails, but the process is very similar for the Molly.

**Tank Size** : 20 gallon minimum, prefer tall aquariums

**Molly Fish Compatible Tank Mates** : Not many - some feel they should only be kept with others of the same species.

**Molly Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Give them a varied diet consisting primarily of flake foods but supplement with live and freeze dried foods occasionally.

**Tank Region** : All over the tank.

**Gender** : Males are more slender, females more round. Males also have a modified anal fin.

**Author** : Mike FishLore

## PLATY, PLATIES - XIPHOPHORUS MACULATUS

The Platy originates in Central America and is a very popular tropical fish. It is very easy to take care of and well suited for the freshwater fish beginner. The Platy fish comes in many different color varieties including the salt and pepper platies, the red wag tail and the tuxedo platy. There is even a variety called the Mickey Mouse. They can be a very active tropical fish if given good water conditions.

The female Platy is usually larger than the males of the same age. Females can reach a size of up to 2.5 inches whereas the males usually get to be about 1.5 inches. Breeding them is fairly easy since they are livebearers.

Platies will accept most fish foods including flakes, frozen, live and freeze dried foods. Try to vary their diet for optimum health and coloration.

Also see the [Platy FAQ](#) on the forum for more information.

### Platy Picture



### Platy, Platies Fish Profile Facts and Care Information

**Scientific Name :** Xiphophorus maculatus

**Common Names :** *Many and usually based on the color patterns - Southern Platy, Red Wagtail Platies, Red Platy, Mickey Mouse Platy, Red Tuxedo, Moon Fish, Topsail Rainbow, Sunset, Golden, Calico, Salt and Pepper, Coral Red, Black, Blue, the list goes on and on and on and on.*

**Care Level :** Easy, good first fish for freshwater fish beginners

**Size :** 2 inches (5 cm)

**pH :** 7 - 8

**Temperature :** 65°F - 78°F (18°C - 26°C)



**Water Hardness :** 10° to 25° dH

**Origin / Habitat :** Central America

**Lifespan :** 2 - 3 years

**Platy Temperament / Behavior :** This is a good tropical fish for the beginner. They are a very peaceful tropical fish. Also, it can be a good idea to have two females for every one male. Doing this will prevent the male from harassing a single female.

**Platy Breeding / Mating / Reproduction :** They are livebearers which means that a pregnant platy the babies can swim immediately after birth. Usually, not much effort is required to get them to breed. If you have a male and a female, chances are they will breed. The parents must be separated from the young after birth. For more information on breeding them, please read the [breeding livebearers](#) article. That article talks about guppies and swordtails but the process is similar with Platies.

**Tank Size :** 10 gallon or larger.

**Platy Compatible Tank Mates :** They make an excellent fish for a community tank given their peaceful nature.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Give them a varied diet consisting of flakes, live and freeze dried foods for optimum health.

**Tank Region :** All over the aquarium

**Gender :** The female is usually bigger than a male of the same age. The male Platy also has a modified anal fin called a gonopodium.

**Author :** [Mike FishLore](#)

**Fish Lore Forum :** [Platy Forum](#)

## SWORDTAIL - XIPHOPHORUS HELLERI

The Swordtail comes in many different colors with the males being easily identified by their signature sword like tail. The Swordtail is an extremely hardy fish that can adapt to a wide range of water conditions.

They are livebearers which means that the baby fish come out free swimming. Like their livebearer counterpart, the guppy, the swordtail is a prolific breeder and a female will give birth about once every 28 days. If you are interested in breeding them, please check out the breeding livebearers page for more information.

Some hobbyists have reported problems with aggression among male swordtails when keeping multiples. It may be a good idea to limit the number of male swordtails in your tank. A good mix may be three females to one male.

They will eat most fish foods including flakes, frozen, freeze dried and live foods such as brine shrimp.

### Swordtail Pictures



### Swordtail Profile Facts and Care Information

**Scientific Name :** Xiphophorus helleri

**Common Names :** *Black Swordtail, Gold Tux, Green, Lyretail, Neon, Red Simpson, Spotted, Red Velvet Swordtails, Black Velvet, Belize, Atoyac*

**Swordtail Care Level :** Easy, good fish for freshwater fish beginners

**Size :** Up to 5 inches (13 cm)

**pH :** 7 - 8

**Temperature :** 72°F - 82°F (22°C - 28°C)

**Water Hardness :** 9° to 15° dH

**Lifespan :** 3 - 5 years

**Origin / Habitat :** Central America

**Swordtail Temperament / Behavior :** The swordtail is a tough little fish. They can take care of themselves when there are bigger fish in the tank. The males may become aggressive towards other males.

**Swordtail Breeding / Mating / Reproduction :** They are livebearers, so it is fairly easy for them to breed. Be sure to give a lot of floating cover for the baby swords. Try to put the babies in a separate tank otherwise the adult fish will eat them. Check out this breeding swordtails article for more information.

**Tank Size :** 10 gallon or larger

**Swordtail Compatible Tank Mates :** Don't keep with tropical fish big enough to eat them. They should be able to handle themselves with many fish their same size or larger.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Omnivore but they need some greens in their diet. The Swordtail will take flake, freeze dried and live foods.

**Tank Region :** All over the tank

**Gender :** Easy to determine - the male has a signature long anal fin.

**Fish Forum :** Swordtail Forum

**Author :** Mike FishLore

## LOACHES

### CLOWN LOACH - BOTIA MACRACANTHA

The Clown Loach is another favorite in the tropical fish world. The Clown Loach can live for a very long time, often 10 years or more if given good water conditions. They can be comical at times, like when they perform the strange behavior of laying on their side. Provide plenty of hiding spaces for your clown loach because they can also become quite shy at times.

This is one of those fish that are more susceptible to ich than others. In fact, they are usually the first fish to die when water quality declines. For that reason, they are not recommended for the freshwater fish beginner. If you are planning on keeping them in your tank it may be a good idea to set up a quarantine tank for any fish you plan on adding to your tank. A quarantine tank will help prevent the spread of ich to your clowns.

For fish food, the Clown Loach will go after vitamin enriched flakes and wafers but they seem to especially enjoy shrimp pellets.

#### Clown Loach Picture



#### Clown Loach Profile Facts and Care Information

**Scientific Name :** Botia macracantha

**Common Names :** *Clown Loach*

**Care Level :** Medium, very prone to ich infestation and is not recommended for the freshwater aquarium fish beginner.

**Size :** 12 inches (30 cm)

**pH :** 6 - 7.5

**Temperature :** 75°F - 85°F (24°C - 29°C)

**Water Hardness** : 5° to 15° dH

**Origin / Habitat** : Borneo, Sumatra

**Clown Loach Lifespan** : 10 years and longer

**Clown Loach Temperament / Behavior** : They are generally peaceful and can usually be kept in a community aquarium.

**Clown Loach Breeding / Mating / Reproduction** : Breeding them can be difficult in the home aquarium. Read the following article for more information: [Breeding Clown Loaches](#)

**Tank Size** : 75 gallon or larger.

**Clown Loach Compatible Tank Mates** : Many given their peaceful nature. They do best when kept in a small school of 4 or more.

**Fish Disease** : [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Will accept many types including flakes, freeze dried and live foods.

**Tank Region** : Mostly the bottom

**Gender** : Difficult to determine the gender.

**Author** : [Mike FishLore](#)

**Fish Lore Forum** : [Clown Loach Forum](#)

## DOJO LOACH - MISGURNUS ANGUILLICAUDATUS

The Dojo Loach is a fairly popular fish in the aquarium trade usually costing anywhere from \$8 - \$15 US Dollars. The Dojo Loach is sometimes called the Weather Loach because of its reported behavior when the barometric pressure drops. Some hobbyists have reported witnessing increased activity levels, erratic swimming, etc. when storms are approaching. The Dojo Loach is originally from North Eastern Asia and China but have been imported and introduced into other habitats in various places around the world not always with good results. This Loach is considered a food source in some Asian countries.

The Dojo Loach can be considered a good fish for the freshwater fish beginner because it generally has undemanding water parameters, except for the temperature. They need lower water temperatures in the 65°F - 75°F range (18°C - 24°C) which may limit the number of possible tank mates. Provide them with a softer substrate because they like to burrow. Sand or aquarium gravel that is rounded should suffice.

They are accomplished escape artists and will find any open holes in the top of the tank. Make sure your tank hood is well secured. It is interesting to note that this fish can breathe in air when the oxygen levels in the water become depleted. So, if yours has jumped from the tank, try putting it back in the tank as soon as possible. You never know... Provide some hiding places for your loaches to help make them feel more secure. A cave of some sort or a bunch of plants (real or artificial) can provide really good hiding places.

Feeding the Dojo Loach should not be a problem. They will accept nearly everything you offer them. Give them a variety of aquarium fish foods such as sinking shrimp pellets, frozen or freeze-dried blood worms and vitamin enriched flake foods.

### Dojo Loach Picture



Photo Credit: Ryan Hill

## Dojo Loach Profile Facts and Care Information

**Scientific Name :** *Misgurnus anguillicaudatus*

**Common Names :** *Weather Loach, Japanese Weatherfish, Oriental Weatherfish*

**Care Level :** Easy, good for a freshwater fish beginner

**Size :** Up to 10 inches (25 cm)

**pH :** 6 - 7.5

**Temperature :** 65°F - 75°F (18°C - 24°C)

**Water Hardness :** 5° to 12° dH

**Lifespan :** 7 - 10 years

**Origin / Habitat :** North East Asia to China in rivers and lakes, likes muddy substrates.

**Dojo Loach Temperament / Behavior :** This loach can be kept as a single but may do better and have increased activity levels if kept with multiple loaches. May be aggressive with much smaller fish, but should do fine with most fish with similar care requirements.

**Breeding / Mating / Reproduction :** Not very common in the home aquarium. May need cooler water temperatures for spawning.

**Tank Size :** 55 gallons (208 liters)

**Compatible Tank Mates :** Try to keep them with species with compatible water parameters, (cooler temperature) white cloud mountain minnows or in a species only tank.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** They should accept nearly all aquarium fish foods and will scavenge around much of the time.

**Tank Region :** Mostly the substrate or resting on objects in the tank.

**Dojo Loach Gender :** Very difficult to determine gender differences externally.

Author : [Mike FishLore](#)

Fish Lore Forum : [Dojo Loach Forum](#)



## HILLSTREAM LOACH - BEAUFORTIA KWEICHOWENSIS

*Beaufortia kweichowensis*



The Hillstream Loach is a really neat little fish that is great at eating the small crustaceans and larvae (aufwuchs) that grows in algae. The Hillstream Loach can be very shy and won't really show themselves in the home aquarium too much. The first thing you should know about these amazing little fish is that they need lots of oxygen in the tank to survive. So they would need colder water, which can hold more oxygen than warm water, and would need a strong current to keep the oxygen near the sides and decorations. They are usually best suited for pond tanks or ponds in general since they require cold water, unlike most fish, which prefer it. If the tank gets too hot for the loach, they will die because their body can't seem to cope with the warmer temperatures, plus the warmer the water, the less oxygen in it.

The tank the Hillstream Loach should be put in should be well established since they eat algae and a new tank doesn't seem to have any algae in it right away. The tank should be pH neutral to slightly alkaline for them to thrive as well as medium hard water with a temperature set at 68-75°F (20-24°C). They should be fed good quality algae wafers, mysis shrimp, or blood worms. If these fish are well cared for, and have the proper tank set up, they can live for 8-10 years and get to 3" at most.

The most similar species to the Hillstream Loach are the other *Beaufortia* species but are similar to the other small algae eaters. There are different color varieties of this little fish, but the most common is one with spots and is also known as the spotted loach at some stores. They can also be pretty expensive depending on the store and the color variant that you get. These fish sometimes like to be in groups of 3 or more and will feel more comfortable in a small group.

[Hillstream Loach Profile and Loach Care Information](#)

**Scientific Name :** *Beaufortia kweichowensis*, *Beaufortia leverreti kweichowensis*

**Other Common Names :** Chinese Butterfly Loach, Hong-Kong Pleco, Butterfly Hillstream Loach, Chinese Sucker

**Care Level :** Moderate to difficult.

**Size :** 2.5 - 3 inches (6 - 7.5 cm)

**pH :** 7 - 8

**Temperature :** 68 - 75°F (20 - 24°C)

**Water Hardness :** Medium to hard water conditions

**Origin / Habitat :** Various areas of China

**Lifespan :** 5 - 10 years

**Temperament / Behavior :** Peaceful, won't harm anything in the tank, except for the brown diatoms.

**Breeding / Mating / Reproduction :** Very difficult in the home aquarium.

**Tank Size :** 55 gallon or larger.

**Compatible Tank Mates :** Mostly just coldwater fish that are able to tolerate a strong current in the tank.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** Herbivore, but the Hillstream Loach will accept meaty foods. Diatoms in the tank as well as algae wafers as a treat are good algae foods, but for the meaty foods, mysis shrimp and bloodworms are good foods.

**Tank Region :** Sides and decorations

**Gender :** It is very difficult to determine gender by external differences.

**Gallery Photos :** [Loach Photos](#)

**References / Recommended Reading:**

- [www.loaches.com/species-index/beaufortia-kweichowensis](http://www.loaches.com/species-index/beaufortia-kweichowensis)

- [en.wikipedia.org/wiki/Chinese\\_sucker](http://en.wikipedia.org/wiki/Chinese_sucker)

- [www.aquahobby.com/gallery/e\\_hillstream.php](http://www.aquahobby.com/gallery/e_hillstream.php)

Photo Credit: Lerdsuwa

**Fish Lore Forum :** [Loach Posts](#)

### The Kuhli Loach - (*Ancanthopthalmus Kuhlii*)



The Kuhli loach, also commonly known as Coolie loach, comes from the Tropical waters of Indonesia, Malaysia, Java and surrounding areas. The Kuhli Loach is eel shaped. Its body colorings are a kind of salmon-pink/yellow with dark brown to black stripes that half circles the body. The stomach is a sort of a whitish color. The eyes on the Kuhli Loach are set in one of the stripes and therefore not easily seen. The mouth is set at a downward angle and with 3 pairs of bushy barbells adorning it; it looks like it has an obstinate little moustache. Its fins are translucent.

This rather pretty little loach is fairly easy to care for in the home aquarium, needing water that is medium-soft to medium and pH around 6.0 to 7.0. It has been known, however, for them to adapt to most water conditions. Its region in the tank is the bottom where it browses for food. The temperature should be 75 - 85 F (24 - 29 C).

The kuhli loach has an advantage over most of the other loaches kept in aquariums, inasmuch as it never grows too large, growing around 8-11 cm (3-5 in) in length. Also their bio load is very small for a loach. Be sure to keep the tank covered properly at all times as it can squeeze out of quite small places. The minimum tank size required for the kuhli is 20 gallons (37 liters).

They also prefer sand for substrate but if sand is not appropriate, smooth stones should be used so that the loach won't scratch its body on gravel or stones. Sharp edged decorations also would not be a good idea, with their habit of squeezing into tight places they could get badly scratched.

Kuhli loaches are peaceful fish and prefer to be kept in schools of 3 or more. Because of this fishes beauty, many hobbyist get them straight after the nitrogen cycle has completed. It is, however, not advised to get them for the new aquarium as they are affected by sudden water changes. It is best recommended to wait a month before introducing them to the aquarium.



Many fish can be kept as tank mates with the Kuhli Loach as long as precaution is taken not to include fish that are able to take them for a bite of food. In other words, don't keep fish that are big enough to eat them. They scavenge for food mainly at dusk or in the dark as they are nocturnal, and spend most of their time hiding in the substrate, plants and decorations during the day. But with time most of them readily learn to eat during the day time. Being scavengers they eat most fish food, however sinking food pellets are preferred as well as live foods, for instance; bloodworms and brine shrimp. It is recommended to feed them either, just before the lights are turned off for the night or after the lights have been off for a while. Don't switch on the lights during the process it may scare the fish back into hiding. This is sometimes done with a flashlight when a curious hobbyist wants to see what's going on when its dark inside the tank, but NEVER shine a flashlight into the tank after the lights have been off for a few hours! It will put the other fish and maybe the kuhli loach into a state of shock!

There are no specific common diseases that can affect the kuhli loach. It may get affected by any disease or if you do everything correctly, it will not get any disease at all. Like other scale less fish, it is affected a lot from medications that treat diseases like ich, so with a scale less fish, the best thing to do is just increase the temperature. The tank water should be kept clean at all times. That way it lessens any chance of poor health and enables your fish to stay strong and healthy. The life span of kuhli loaches is approximately 10 years, but longer has been recorded.

Kuhli loaches are mostly bred in their native areas as they are very much available most of the time. Breeding in the home aquarium can be difficult. The eggs are stuck to roots, buried beneath the surface of the substrate. Females are plumper when ready to breed. This is the only way to identify the sexes. Most breeding is done accidentally when many kuhli loaches are put in a tank together and they breed by themselves. If you want to try and breed them, the best way is to get a bunch of them in a tank with an undergravel filter. Leave the kuhli loaches by themselves without any other fish for a few weeks, while still doing regular maintenance.

### What Fishlore Members Have To Say About The Kuhli Loach

"Kuhli loaches are really cool! They love to dash around through the bubble wall, hang from the java Ferns like Christmas decorations and they are very easy to train to eat from your fingers. We

love their unusual shape, their striking colours and most of all that they're such hyperactive, funny clowns!! They'll just dart around for hours and hours and hours, and then suddenly stop and rest.

They're always trying to squeeze in stupidly tight spaces, to our great entertainment! They're really cheeky to our otos and continuously bump into them, head first and at full speed, for some dark and unknown reason. The otos seem to ignore that, so all is well. They make good tank mates, pretty much ignore (and are being ignored) by their other tank mates. They seem to be very tough little fish, nothing seems to faze them. However, they don't eat snails because their mouth isn't made right to eat them. But they're great cleaners otherwise! They seem to loooove sand. They'll burrow through it at high speed, and spit out sand from their gills. Do cover your filter outtakes as they WILL try to swim against current into them, risking... decapitation!"

### Kuhli Loach Profile and Care Information

**Scientific Name :** Pangio kuhlii

**Other Common Names :** *Kuhli Loach, Coolie loach, Prickly eye, Slimy loach, Leopard eel*

**Care Level :** Easy-Medium, tank needs to be well covered so it can't squeeze out

**Size :** 3 - 4.5 inches (8-11 cm)

**pH :** 6 - 7

**Temperature :** 75°F - 85°F (24°C - 29°C)

**Water Hardness :** medium soft to medium

**Origin / Habitat :** Indonesia, Malaysia, Singapore, Thailand, Java, Sumatra, Borneo, Sarawak

**Lifespan :** approximately 10 years in well kept conditions.

**Temperament / Behavior :** Peaceful; most active at dusk; feeds at night, hides during the day

**Breeding / Mating / Reproduction :** Breeding the Kuhli Loach can be difficult in the home aquarium. The eggs buried beneath the surface and stuck to plant roots. Most breeding is done by accident when many coolies are put into a tank and they mate by themselves. The best way to breed them is to get a bunch of them and get a tank with an under gravel filter and leave only coolies in the tank and leave it alone for a few weeks, while still doing the regular maintenance.

**Tank Size** : 20 gallon minimum

**Compatible Tank Mates** : Many due to peaceful nature. Just don't keep with fish big enough to eat them. They prefer to be kept in schools of 3 or more.

**Fish Disease** : susceptible to regular fish diseases, no specifics - [Freshwater Fish Disease - Diagnose, Symptoms and Treatment](#)

**Diet / Fish Food** : Scavenger, sinking food pellets preferred, live foods

**Tank Region** : Bottom dweller

**Gender** : Female coolie loach may be more plump when ready to breed.

**Extra** : They prefer sand for a substrate instead of regular gravel. If sand isn't an option, use very smooth rocks for the bottom so the loaches don't scratch up their body.

**Gallery Photos** : [Khuli Loach Photos](#) or [Kuhli Loach Photos in the Forum](#)

**Fish Lore Forum** : [Kuhli Loach Posts](#)

### References - More Information on Kuhlis

500 Freshwater Aquarium Fish by Greg Jennings

Aquarium Fish by Ulrich Schliewen

Complete Encyclopedia of the Freshwater Aquarium by John Dawes

A super guide to Aquarium Fish by Dick Mills

Aquariums The Complete Guide to Freshwater and Saltwater Aquariums by Thierry Maitre-Allain and Christian Piednoir

Aquarium Fish by Dick Mills

Article Written by: Sabi

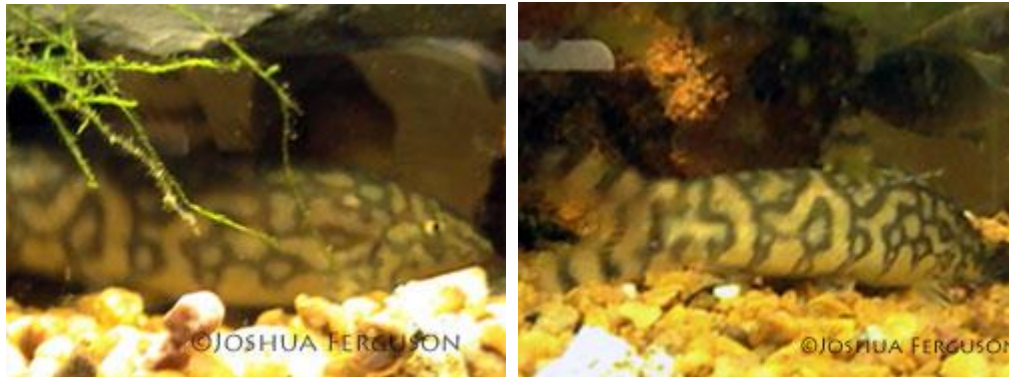
Information provided by: Tom

Photos provided by Carol (Butterfly)

## YOYO LOACH - BOTIA ALMORHAE

The Yoyo Loach (*Botia almorhae*) is a very active and friendly fish that makes a good addition to any community aquarium. The Yoyo Loach can put up with a fair amount of abuse and loves swimming around with groups of other Yoyo loaches, or other fish.

### Yoyo Loach Pictures



### YoYo Loach Fish Profile and Care Information

**Scientific Name :** *Botia almorhae*

**Common Name:** Pakistani Loach, Yoyo Loach, Reticulated Loach

**Care Level:** Easy to Moderate

**Size:** 3 - 6 inches (10-15 cm)

**pH:** 6 - 7.6

**Temperature:** 73 - 82 °F (23 - 28 °C)

**Origin / Habitat:** India, Nepal, Bangladesh.

**Lifespan:** 6 - 16 Years

**Temperament / Behavior:** Highly active and outgoing fish, best kept in groups of 4-5 or more. Non-aggressive.



**Compatible Tank Mates:** Groups of the same species. They can irritate shy delicate fish with their very active nature and should not be kept with slow-moving or shy fish. Can tolerate some aggressiveness from other fish. If kept as the only one of their species, they will "team up" with other fish in the tank.

**Breeding / Mating / Reproduction:** Not bred in aquaria, but mature females regularly fill with spawn.

**Food / Diet:** These fish will eat most food offered, pellets, and flakes, as long as it sinks they are likely to eat it. Varying the diet with some vegetable matter is also to be encouraged. They will eat small snails. Sometimes they will eat from the water's surface.

**Tank Size:** 40 gallons (150 liters)

**Gender:** Mature females are plumper than males. It is widely thought that males may also display more reddish pigment on and around their barbells.

**References:**

- [http://www.theaquariumwiki.com/Pakistani\\_loach](http://www.theaquariumwiki.com/Pakistani_loach)
- <http://www.loaches.com/species-index/botia-almorhae>
- Photo Credit and Copyright: Joshua Ferguson

## TETRAS

### BLACK NEON TETRA - HYPHESSOBRYCON HERBERTAXELRODI

The Black Neon Tetra is another great fish for planted aquariums where slightly acidic water conditions are present. The Black Neon Tetra has a yellow-green stripe that runs the length of the body with a black region under the yellow-green stripe. It looks really neat when you see a school of this fish darting about. The Black Neon Tetra is even smaller than the Cardinal Tetra and Neon Tetra and will display the same schooling behavior when kept in small groups of 6 or more. They are very peaceful and should not be kept with larger fish capable of eating them.

Most Black Neon Tetras available in your local pet shops have been farm raised and should be relatively disease free, but you never know. It's always a good idea to keep any new fish in a Quarantine Tank for a few weeks for monitoring before introducing them into your main tank. The Black Neon Tetra can be sensitive to fluctuations in pH and temperature. You may also want to take a little longer when acclimating this fish to your tank water. Take an hour (instead of 15 minutes) and slowly add small amounts of tank water to the bag every 10 minutes or so.

They will accept smaller fish food including flakes, frozen, freeze dried and live foods.

#### Black Neon Tetra Picture



#### Black Neon Tetra Profile Facts and Care Information

**Scientific Name :** Hyphessobrycon herbertaxelrodi

**Common Names :** *Black Neon Tetra*

**Care Level :** Easy to Moderate

**Size :** 1.5 inches (3-4 cm)

**pH :** 5.5 - 7.0

**Temperature :** 72°F - 80°F (22°C - 27°C)

**Black Neon Tetra Lifespan :** 3 - 5 years

**Origin / Habitat :** South America, Brazil

**Temperament / Behavior :** Very peaceful and best kept in a small school (shoal) of 6 or more.

**Breeding / Mating / Reproduction :** They have been bred in captivity and are egg layers.

**Tank Size :** 20 gallon minimum (schooling fish)

**Compatible Tank Mates :** They are a very peaceful little fish. Keep them in a small school and try not to keep them with larger fish that may be tempted to eat them, such as Angelfish

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** An omnivore - provide a varied diet with live food, frozen food and they should accept flake food.

**Tank Region :** Middle to bottom

**Gender :** Can be difficult to determine, female may be more full bodied

**Fish Lore Forum :** Black Tetra Forum

**Author :** Mike FishLore

## BLACK PHANTOM TETRA (HYPHESOBRYCON MEGALOPTERUS)

The Black Phantom Tetra is a full bodied tetra with a black diamond patch with a green or silver outline on the sides of its body. The male Black Phantom Tetra can take on a darker color when ready to breed or when defending its territory in the aquarium against other black phantom tetras.

Just like other tetras, this one is no exception when it comes to wanting to school. Plan on keeping them in groups of 6 or more. They will develop a pecking order amongst the group. Males may spar with each other but this activity should not cause any significant amounts of damage to them. They should do fine in a community setup with smaller less aggressive species. They like to occupy the middle and bottom levels of the aquarium.

The Black Phantom Tetra are fairly good eaters and feeding them should be easy. The key is to provide a high quality and varied diet to bring out the wonderful colors of this fish. The photo with this fish profile doesn't do it justice. If you're planning on breeding them, your food selection becomes even more critical. High quality flake food with occasional live foods or frozen foods will fit the bill here.

### Black Phantom Tetra Picture



### Black Phantom Tetra Profile Facts and Care Information

**Scientific Name :** Hyphessobrycon megalopterus

**Common Names :** *Black Phantom Tetra, Phantom Tetra*

**Black Phantom Tetra Care Level :** Easy

**Size :** Up to 2 inches (5 cm)

**pH :** 6 - 7.5

**Temperature :** 72°F - 80°F (22°C - 27°C)

**Black Phantom Tetra Lifespan :** 3 - 5 years, perhaps longer

**Origin / Habitat :** South America, various river basin areas

**Temperament / Behavior :** This is a generally peaceful fish and does well when kept in a small school of 6 or more. However, they males may become aggressive with other male black phantom tetras around spawning time.

**Black Phantom Tetra Breeding / Mating / Reproduction :** Can be difficult. They will need a tank all to themselves with no substrate since they are egg scatterers. Condition with high quality foods, lower the light levels and drop the pH slightly. More information on [breeding this fish](#).

**Tank Size :** 10 gallon minimum

**Compatible Tank Mates :** Similar or smaller sized species (tetras, rasboras) that are comparable in temperament. Does well with other tetras.

**Fish Disease :** [Freshwater Fish Disease](#)

**Diet / Fish Food :** This fish is an omnivore, meaning that they will accept all sorts of foods. In the wild they are thought to feed on small insects but this can be difficult to reproduce for the average hobbyist. Give them a varied diet but provide a high quality flake food as the main portion. Treat them periodically to foods higher in protein such as blood worms and brine shrimp.

**Tank Region :** Middle to bottom

**Gender :** Females look more full bodied (eggs) and the male may become darker colored when ready to breed. Males may sport black fins whereas female fins may be redder in color.

**Fish Lore Forum :** [Black Phantom Tetra Forum](#)

**Author :** [Mike FishLore](#)

## BLACK SKIRT TETRA (GYMNOCORYMBUS TERNETZI)

The Black Skirt Tetra has a few different common names such as the Black Tetra and the Black Widow Tetra. They are very popular among hobbyists and usually available at most fish stores. There are some different color varieties (may be dyed fish, look closely) and even some long fin varieties. The Black Skirt Tetra may lose some of the black coloration as they age. Also check out the [White Skirt Tetra](#) profile.

The Black Skirt Tetra can make a nice addition to a community tank with the right mix of tank mates. Avoid keeping them with known fin nippers like tiger barbs and likewise, avoid keeping them with fish that have larger fins such as Angelfish because Black Skirts have been caught nipping fins themselves. Try to keep your Black Tetras in groups of 5 or more to keep any fin nipping at a minimum, or at least amongst the school.

The Black Skirt Tetra is not very demanding as far as water quality goes and can be recommended to the freshwater beginner. Try to keep them in a large enough tank so you can get a school of them and keep up with those water changes. However, they probably won't make it through a complete aquarium nitrogen cycle, so make sure that your tank is cycled before introducing them. Yes, this means that you definitely need to have an [aquarium test kit](#).

They are not very picky when it's chow time. Give them a variety of vitamin enriched fish foods and they should do well. Toss them some frozen foods every once in a while as a treat.

### Black Skirt Tetra Picture



### Black Skirt Tetra Profile Facts and Care Information

**Scientific Name :** *Gymnocorymbus ternetzi*

**Common Names :** *Black Skirt Tetra, Black Tetra, Black Widow Tetra*

**Black Skirt Tetra Care Level :** Easy, a good freshwater beginner fish.

**Size :** 2 inches (6 cm)

**pH :** 6 - 7.5

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 5° to 20° dH

**Black Skirt Tetra Lifespan :** 3 - 5 years

**Origin / Habitat :** South America, river basin areas

**Temperament / Behavior :** A generally peaceful little tetra that needs to be in a school of 5 or more.

**Black Skirt Tetra Breeding / Mating / Reproduction :** Egg scatterers. The adults may eat the eggs. You will need a bare bottom breeding tank and will have to remove the adults after they release the eggs.

**Tank Size :** 20 gallons (114 liters) - a schooling fish and should be kept in groups of 5 or more.

**Compatible Tank Mates :** You don't want to keep them overly aggressive tank mates. If you have a long fin black tetra, you will want to avoid putting them in a tank with known fin nippers such as tiger barbs. They have also been known to nip a fin or two themselves. Angelfish and Bettas should probably not be mixed with these tetras.

**Fish Disease :** Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** The Black Skirt should eat most common aquarium foods. Flakes, frozen, freeze dried and may nibble at some aquarium plants.

**Tank Region :** All over, but mostly in the middle and top areas of the fish tank.

**Black Skirt Tetra Gender :** The female will usually be larger and the male may have a wider anal fin.

**Fish Lore Forum :** Black Skirt Tetra Forum

**Author :** Mike FishLore

## BLEEDING HEART TETRA - HYPHESSOBRYCON ERYTHROSTIGMA

The Bleeding Heart Tetra is a fairly hardy tropical fish and a good one for freshwater fish beginners that practice good aquarium maintenance. The Bleeding Heart Tetra are sought after because they are a very nice looking fish and especially for the small red spot ("heart") located on the sides. This is a fairly active fish that should bring lots of activity to your tank if kept in a small school (shoal).

Like many tetras, the Bleeding Heart Tetra can be prone to fin nipping if kept individually. Try to keep 4 or more at a time to help make them feel more secure with their surroundings.

The Bleeding Heart Tetra will accept most tropical fish food including flakes, freeze-dried, frozen and live foods. It's acceptable to use flakes as their primary diet but try to supplement their diet with frozen or live foods from time to time.

This tetra is susceptible to the usual freshwater fish diseases. Even though they are usually farm raised now, they still may go through many shipping points and will be housed in various tanks by the time they reach your pet store. So don't forget to quarantine any of your new arrivals!

### Bleeding Heart Tetra Picture



### Bleeding Heart Tetra Profile Facts and Care Information

**Scientific Name :** Hyphessobrycon erythrostigma

**Common Names :** *Bleeding Heart Tetra, Red Tipped Tetra, Punto Rojo*

**Care Level :** Easy to Moderate, considered a good choice for freshwater fish beginners.

**Size :** 3 inches (8 cm)

**pH :** 6.5 - 7.0

**Temperature :** 72°F - 80°F (22°C - 27°C)



**Bleeding Heart Tetra Lifespan** : 3 - 5 years

**Origin / Habitat** : South America, Columbia

**Temperament / Behavior** : Can be peaceful when kept in a small school (shoal) of 4 or more.

**Breeding / Mating / Reproduction** : They have been bred in captivity and are egg layers.

**Tank Size** : 20 gallon minimum

**Compatible Tank Mates** : They are generally a peaceful fish but fin nipping may become a problem. Keep them in a small school and try not to keep them with fish with larger fins such as angelfish and bettas

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : An omnivore - provide a varied diet with live food, frozen food and they will definitely accept flake food.

**Tank Region** : Middle to bottom

**Bleeding Heart Tetra Gender** : Female is more full bodied and the male has a larger dorsal fin

**Fish Lore Forum** : Bleeding Heart Tetra Forum

## BLIND CAVE TETRA - ASTYANAX JORDANI



Blind Cave Tetras are a relatively new tetra to the mainstream aquarium keepers. As their name would indicate, the Blind Cave Tetras have no eyes. They are born with eyes as fry, but the eyes degenerate and are reabsorbed back into the body at a few weeks old. There is a form that has eyes, although you do not generally see this version on the market.

These cave tetras are also completely devoid of pigmentation. They are pink, but will get an iridescent sheen to them as they get older.

The Blind Cave Tetra lives in deep caves in the wild. They range from Texas to Mexico, with the sighted version from Mexico to Panama. There is no need for eye sight in the pitch black caves, so they have evolved to adapt to these conditions.

A larger tetra, Blind Cave Tetras need a minimum of 20 gallons for a school of 5. They can reach up to 4 inches. They prefer subdued lighting, as it is closer to their natural habitat. A sand or small gravel is preferred. Although some will learn to eat off of the surface of the water, most will root in the substrate for food. They do very well on sinking food. They will eat anything that they can get a hold of from flakes, pellets, to live foods. They will also eat any eggs from other fish that may be in the substrate.

Although they are blind, they very rarely swim into the tank sides, decor or other tank mates. They may nip at tank mates when first introduced into a new aquarium, but once they learn that they are not food - they rarely do it again.

These fish are being used in studies about eye growth and transplant. Many strides in the science of the eye have been reached because of research conducted on this fish. The results have scientists hopeful that there is a treatment to cure blindness in humans.

### Blind Cave Tetra Profile and Care Information

**Scientific Name :** *Astyanax jordani*

**Common Names :** *Blind Cave Tetra, Mexican Tetra*

**Care Level :** Easy

**Size :** 3.5 to 4 inches (~ 9 cm)

**pH :** 6.0 to 7.5

**Temperature :** 68 - 77 °F (20-25 °C)

**Lifespan :** 3 to 5 years, possibly longer

**Origin / Habitat :** Texas, USA and Mexico

**Temperament / Behavior :** Fairly peaceful, keep them in schools of 5 or more. May nip at tank mates.

**Breeding / Mating / Reproduction :** Egg layer.

**Tank Size :** Minimum of 20 gallon for just a school of 5

**Compatible Tank Mates :** Virtually anything that won't eat them or has relatively the same water parameter requirements

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Omnivore, will accept flakes, granules, pellets, frozen foods and live foods.

**Tank Region :** Middle of the aquarium

**Gender :** No distinguishing external differences between the sexes. The females when full of eggs are wider when looked at from above

**Similar Species :** see more Tetras

**Profile by :** Amanda

**Photo Credit:** JohnstonDJ - wikipedia

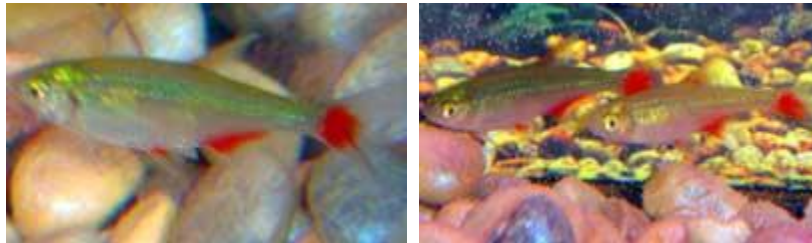
## BLOODFIN TETRA (APHYOCHARAX ANISITSI)

The Bloodfin Tetra is a mainstay of the freshwater fish hobby and for good reason. Bloodfin Tetra have silver bodies with an almost greenish hue (depending on the aquarium lighting) and red fins. A great freshwater beginner's fish, the Bloodfin Tetra will tolerate a wide range of water parameters. Some hobbyists even keep them in coldwater tanks or tanks without heaters. They will tolerate a lower temperature than other tropical fish, but use a heater to keep the temperature stable. Avoid widely fluctuating water temperatures that could stress your fish.

The Bloodfin Tetra can get a little skittish at times. Keeping them in a school of 6 or more should limit this behavior and a larger tank with lots of open swimming space will help prevent them from getting injured. They are quite active and should bring lots of activity to a community tank or a tetra tank setup scheme. You may see them nipping at each other from time to time and this is normal behavior amongst the school. It should not be a cause for concern unless it seems to be getting out of hand.

The Bloodfin Tetra is another fish that isn't too picky about what it eats. A good quality flake should form the main part of their diet with supplemental feeding of brine shrimp (live or dried), frozen freshwater foods and live foods such as worms or small insects.

Bloodfin Tetra Picture



### Bloodfin Tetra Profile Facts and Care Information

**Scientific Name :** *Aphyocharax anisitsi*

**Common Names :** *Bloodfin Tetra, True Bloodfin, Glass Bloodfin, Red Finned Tetra*

**Bloodfin Tetra Care Level :** Easy and can be fairly hardy if acclimated properly. A good freshwater beginner's fish.

**Size :** up to 2 inches (5 cm)

**pH :** 6 - 8

**Temperature :** 70°F - 80°F (21°C - 27°C)

**Bloodfin Tetra Life span :** 5 - 8 years

**Origin / Habitat :** South America river basins

**Temperament / Behavior :** This fish needs to be kept in a small school (shoal) of 6 or more to help keep it calm. It shouldn't pose a problem to it's tank mates but watch closely for minor fin nipping.

**Bloodfin Tetra Breeding / Mating / Reproduction :** Egg layers, they like to have water that is on the acidic side of the pH scale, lower aquarium lighting levels and pre-condition them with high quality foods such as live brine shrimp. The female will place the eggs on wide leaved aquarium plants. You'll need to remove the adults after this or the eggs will quickly disappear. After a few days the eggs should hatch and they fry will feed off their yolk sacs for a few days but then you'll need to give them liquid fry food. After a week or so they should be able to eat baby brine shrimp.

**Tank Size :** 20 gallon minimum (keep in small schools)

**Compatible Tank Mates :** A peaceful fish that's best kept in a small school. Since they only get to be about 2 inches you won't want to keep them with other fish that are capable of eating them. They should do well in a community tank setup.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** In the wild they will eat small insects and worms. You should plan on giving them a good flake food as their primary diet but vary it with bloodworms, brine shrimp and other dried or frozen fish treats occasionally.

**Tank Region :** Middle to Top

**Bloodfin Tetra Gender :** Can be hard to determine, females may be more full bodied and have less red on the fins. Males are usually stream lined with more red on the fins.

**Fish Lore Forum :** Bloodfin Tetra Forum

**Author :** Mike FishLore

## BUCKTOOTH TETRA - EXODON PARADOXUS



The Bucktooth Tetra (*Exodon paradoxus*) is sort of a misnomer in that this fish isn't buck toothed at all. It does however eat the scales of other fish species. Caution is advised if you plan on stocking them with fish that have scales. They reportedly do fine with catfish species. They need to be kept in schools of 5 to 7 or more for best results.

They are considered quite hardy once established and fed a good quality flake or pellet food. Several small feedings per day are recommended.

The Bucktooth Tetra gets to be about 2.9 inches (7.5 cm).

### Bucktooth Tetra Profile Facts and Care Information

**Scientific Name :** *Exodon paradoxus*

**Common Names :** *Bucktooth Tetra*

**Bucktooth Tetra Care Level :** Easy

**Size :** 2.9 inches (7.5 cm)

**Water Parameters :** pH 5.5 - 7.5 | dH range: 5 - 20 | Temperature : 73°F - 82°F (23°C - 28°C)

**Lifespan :** 8 to 10 years

**Origin / Habitat :** South America, Amazon and Tocantins River basins.

**Temperament / Behavior :** Similar to other tetras but they need a species only tank due to them being lepidophages (eats the scales off of other fish).

**Bucktooth Tetra Breeding / Mating / Reproduction :** Egg scatterers and the parents will eat the eggs.

**Tank Size :** 30 gallon recommended (schooling fish)

**Compatible Tank Mates :** Keep them in groups to limit the fin nipping. Avoid keeping them with other fish species except in very large tanks and keep them well fed. Should be ok if keeping them with scale less catfish species.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Fish scales, small insects in the wild. Give them a good pellet food or flake food a few times per day.

**Tank Region :** all over the tank

**Gender :** Don't know of any ways to tell male from females by external characteristics.

**Author :** Mike FishLore

**Photo Credit:** Ltshears

## BUENOS AIRES TETRA - HYPHESSOBRYCON ANISITSI

The Buenos Aires Tetra is one of the hardiest of the commonly available tropical fish but it may not make a good choice for a community tank or a live plant tank. The Buenos Aires Tetra will view your live plants as a food source and will nibble at them. Since it's best to keep them in small schools they can quickly destroy your live plant collection, so plastic plants are the way to go with this fish.

The Buenos Aires is a larger tetra, growing sometimes up to 3 inches (8 cm) and if kept in good water conditions can live 3 to 5 years or more. If you are planning on keeping them in a community tank caution is advised. They can be fin nippers and may bully smaller tetras and slower tank mates. Keep them in schools of 6 or more which should help direct their aggression towards the other tetras instead of their more peaceful tank members.

There is an albino type of this Tetra that will sometimes be available, but it is not as common as the regular version.

The Buenos Aires Tetra is a great eater and you should offer them smaller fish foods including flakes, frozen, freeze dried and live foods. You may see more territorial aggression from them around feeding time.

### Picture



### Buenos Aires Tetra Profile Facts and Care Information

**Scientific Name :** Hyphessobrycon anisitsi

**Common Names :** *Diamond Spot Tetra*

**Buenos Aires Tetra Care Level :** Easy

**Size :** 3 inches (8 cm)



**pH :** 5.5 - 7.0

**Temperature :** 72°F - 80°F (22°C - 27°C)

**Buenos Aires Tetra Lifespan :** 3 - 5 years or longer

**Origin / Habitat :** South America, Paraguay, Uruguay

**Temperament / Behavior :** Can be fin nippers and best kept in a small school (shoal) of 6 or more.

**Buenos Aires Tetra Breeding / Mating / Reproduction :** They have been bred in captivity and are egg layers. They will scatter eggs in plants and they should hatch in 24 hours. Adult fish may eat the eggs.

**Tank Size :** 20 gallon minimum (schooling fish)

**Compatible Tank Mates :** They can be a pest (bullying smaller fish) when kept singly and you may see better behavior if kept in a small school of 6 or more.

**Fish Disease :** [Freshwater Fish Disease](#)

**Diet / Fish Food :** An omnivore - provide a varied diet with live food, frozen food and they should accept flake food. They will eat live plants too.

**Tank Region :** Middle to bottom

**Gender :** Can be difficult to determine, female may be more full bodied

**Fish Lore Forum :** [Buenos Aires Tetra Forum](#)

**Author :** [Mike FishLore](#)

## CARDINAL TETRA - PARACHEIRODON AXELRODI

The Cardinal Tetra looks very similar and is often confused with the Neon Tetra. The Cardinal Tetra will have the red stripe the full length of its body on the lower half, whereas the Neon Tetra will have the red stripe only half way. These tetras make excellent community tank mates and for best results you should keep them in a school (shoal) of 6 or more.

The cardinal tetra prefers water slightly on the acidic side and for best results you'll want to acclimate them very slowly to your tank. Slowly mix in a little water from your tank to the bag they came in over a period of an hour or more. They can be very sensitive to dramatic changes in water chemistry (especially pH). Though these Cardinal Tetras should fare well if properly acclimated, this is not the fish to add to a new aquarium. Make sure that your tank has completed the aquarium nitrogen cycle. Give the Cardinal Tetra a tank with low light levels and lots of aquarium plants.

It can be difficult to differentiate the male from the female Cardinal Tetra, but there is speculation that the females are a little bit larger than the male.

Cardinal Tetras will accept all sorts of tropical fish food, including flakes, frozen and freeze dried foods and definitely live foods.

### Cardinal Tetra Picture



### Cardinal Tetra Profile Facts and Care Information

**Scientific Name :** Paracheirodon axelrodi

**Common Names :** *Cardinal Tetra*

**Cardinal Tetra Care Level :** Easy, acclimate slowly to your tank water and don't even think about adding them to an aquarium that has not completed the aquarium nitrogen cycle.

**Size :** Up to 2 inches (5 cm)

**pH :** 5.5 - 7, prefer water slightly on the acidic side

**Temperature :** 73°F - 80°F (23°C - 27°C)

**Water Hardness :** 2° to 6° dH

**Lifespan :** 2 - 5 years

**Origin / Habitat :** South America

**Temperament / Behavior :** This is a very peaceful tropical fish and best kept in schools of 6 or more.

**Breeding / Mating / Reproduction :** They can be difficult to breed in the home aquarium. They are egg layers and the adult fish must be removed after dropping the eggs. Provide low lighting and very soft water (1° to 3° dH). Feed the fry brine shrimp.

**Tank Size :** 10 gallon or larger.

**Compatible Tank Mates :** Many, given their peaceful nature. Avoid keeping with tropical fish large enough to eat them.

**Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Will go after flakes, live and freeze dried foods. Give them a varied diet for best results.

**Tank Region :** Mostly middle to top.

**Cardinal Tetra Gender :** The male is usually smaller than a female of the same age.

**Fish Lore Forum :** Cardinal Tetra Forum

## COCHU'S BLUE TETRA - BOEHLKEA FREDCOCHUI



The Cochus Blue Tetra (*Boehlkea fredcochui*) is one of the smaller tetras and is not as widely available in the U.S. as in some other parts of the world. They need to be kept in schools like other tetras with a 20 to 30 gallon being about the smallest fish tank size to start with. They look great in heavily planted tanks.

The Cochus Blue Tetra gets to be about 1.6 inches (4.1 cm).

### Cochus Blue Tetra Profile Facts and Care Information

**Scientific Name :** *Boehlkea fredcochui*

**Common Names :** *Blue Tetra, Cochus Blue Tetra*

**Cochus Blue Tetra Care Level :** Easy

**Size :** 1.6 inches (4.1 cm)

**Water Parameters :** pH 6 - 8 | dH range: 5 - 12 | Temperature : 73°F - 82°F (23°C - 28°C)

**Lifespan :** 3 to 4 years

**Origin / Habitat :** South America, Amazon River basins.

**Temperament / Behavior :** May be fin nippers when not kept in appropriately sized aquariums and when not kept in large enough schools.

**Cochus Blue Tetra Breeding / Mating / Reproduction :** Egg scatterers and the parents will eat the eggs. Eggs need slightly acidic conditions for better hatch rates.

**Tank Size :** 20 to 30 gallon recommended (schooling fish)

**Compatible Tank Mates** : Keep them in groups of 5 or more to limit the fin nipping. Should do fine with other species when kept in a small school. You obviously don't want to keep them with fish big enough to eat them.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Give them a high quality micro pellet type food or flakes. Supplement with live or thawed freshwater fish food preparations (cube packs).

**Tank Region** : all over the tank

**Gender** : Males will be thinner with bolder colors than females.

**Photo Credit**: Ille Faut (wikimedia)

**Author** : Mike FishLore

## CONGO TETRA

The Congo tetra originates from the River Congo as well as Central African rivers. Congo Tetra are extremely beautiful African characins, growing slightly larger than most of its kind. They have slightly compressed and elongated bodies which have an iridescent coloration. Generally, the mid body has a gold stripe while the flanks have a violet or turquoise color. The fins of well looked after and healthy fish are long and flowing and vary in color from grey to a lovely purple.

Congo tetras require a tank of no less than 30 gallons because in keeping them it is advised to keep them in schools of six to eight. Keeping them in lesser numbers may result in them being very skittish and stressed as they don't feel protected enough. And it is because of this that most of the Congo tetras seen today do not look anything like the beautiful fish it supposed to be. They need the space to be able to swim and develop their beautiful coloration. While they are able to tolerate other neutral pH levels, Congo tetras prefer softer water with a pH of 6.0 to 6.5. The temperature range these fish are happy with vary from 75 to 81°F (24 to 27°C).

Congo Tetras are fairly easy to care for if giving the necessary setup and needs. Nicely planted aquariums are especially good to have for these fish as it will supply cover for them to retire to if they are startled or afraid. Either plastic or live plants will be good enough, however it is good to keep in mind that live plants will help keep the nitrates low. Plenty of swimming place must be left for them as well, perhaps (depending on the type of tank) placing the plants at the back and sides would leave most of the front enough swimming space. Water quality is an important factor as they can be sensitive. Good filtration and circulation will help make a perfect environment. The adult size of the male Congo tetra reaches 3 inches with the females being slightly smaller.

As Congo tetras are timid by nature it is not advisable to keep them with much larger fish, very fast fish or fish that are aggressive toward them. This might stress them, again another point in that they are not colorful anymore, this time due to stress. They will mostly occupy the middle and top waters of the tank. The best type of fish to be kept with them are other characins but this is not to say that other fish are not advisable, just be sure to keep fish that have more or less the same nature of the Congo tetra. It may not be a good idea to keep fish that are much smaller than them too, as they can nip at them. They also tend to nip at young plants.

Congo tetras are omnivores and will generally feed on flake, live and frozen foods easily. Give them a varied diet and feed live insect larvae and vegetables as an added diet to obtain the best of health.

The male is more brightly colored than the female and has a longer dorsal fin. Males are also bigger in body size compared to females. The females, being slightly smaller and duller compared

to the male, generally has a swelled stomach when they are carrying eggs, this is with mature females. The tank intended to be used for breeding should have peat for substrate and soft acidic water. After courting the female can lay up to 300 eggs, scattered among the plants at the bottom. The newly hatched fry can be fed newly hatched brine shrimp and nauplii.



Photo Credit: Andre Karwath

### Congo Tetra Profile and Catfish Care Information

**Scientific name:** *Phenacogrammus interruptus*

**Common name:** Congo tetra

**Care-level:** Easy-Medium

**Size:** Males get to 3", females are a little smaller

**pH:** 6.0-6.5

**Temperature:** 75-81°F (24-27°C)

**Water Hardness:** Soft

**Origin/Habitat:** Central Africa Rivers and River Congo

**Lifespan:** 3-5 years, possibly longer

**Temperament / Behavior:** Peaceful and tolerant, may nip at delicate and succulent plants. Just don't keep with fish that are robust, hyperactive, and aggressive.

**Breeding:** Difficult in the home aquarium. The eggs hatch 6 days after being laid and fertilized.

**Compatible Tank mates:** Any other tetras, small fish that won't eat the Congo tetra, or fish that have the same needs as the Congo Tetra.

**Fish Disease:** Signs and treatments for some common freshwater fish disease

**Fish Food:** Omnivore, give live insect larvae, and vegetables as an added diet for best health.

**Tank Region:** Middle to top

**Gender:** The males have a long dorsal fin and are a little bigger than the females. The females get fuller in the middle when they are mature because they are holding eggs.

**Tank Size:** A minimum of 30 gallons since they like to school with at least 6-8.

**Similar Species:** Other tetras and Characins.



## DIAMOND TETRA - MOENKHAUSIA PITTIERI



The Diamond Tetra (*Moenkhausia pittieri*) gets its common name from the way its scales shimmer like diamonds under the right lighting. They do better in soft and slightly acidic water conditions. Keep them in schools of 5 or more for better results.

The Diamond Tetra gets to be about 2.3 inches (6 cm).

### Diamond Tetra Profile Facts and Care Information

**Scientific Name :** *Moenkhausia pittieri*

**Common Names :** *Diamond Tetra, Diamond Characin*

**Diamond Tetra Care Level :** Easy

**Size :** 2.3 inches (6 cm)

**Water Parameters :** pH 6 - 7 | dH range: 5 - 12 | Temperature : 75°F - 82°F (24°C - 28°C)

**Lifespan :** 3 - 5 years

**Origin / Habitat :** South America, Lake Valencia basin in Venezuela

**Temperament / Behavior :** Very similar to other tetras. Keep them in groups of 5 or more.

**Diamond Tetra Breeding / Mating / Reproduction :** Needs to be well conditioned on high quality foods well before mating. Bump the temperature up to around 80F. Egg scatterers and the parents will eat the eggs. Eggs hatch after 36 hours and fry are swimming after 4 days.

**Tank Size** : 20 to 30 gallon recommended (schooling fish)

**Compatible Tank Mates** : Keep them in groups to limit the fin nipping. Avoid keeping them with fish large enough to eat them.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : In the wild they feed on insects, worms and crustaceans (ref:fishbase). They will accept a good flake or pellet food. Supplement with live or thawed freshwater foods from time to time.

**Tank Region** : Middle to bottom, a fairly active fish

**Gender** : Males have much longer dorsal fins than female diamond tetras.

**Photo Credit**: Neale Monks

**Author** : Mike FishLore

## DISK TETRA - MYLEUS SCHOMBURGKII



The Disk Tetra (*Myleus schomburgkii*) can attain a very large size as adults, reaching up to 16 inches (42 cm)! You need a very large tank if you plan on keeping the Disk Tetra. They are known to have a strong bite (ref: fishbase - "Has powerful dentition that can cause serious bites.") so use caution when working around larger adults. Most hobbyists should just take a pass on this fish if you see them in the store given their potential adult size.

### Disk Tetra Profile Facts and Care Information

**Scientific Name :** *Myleus schomburgkii*

**Common Names :** *Disk Tetra, Disk Pacu, Black Band Myleus, Pampano*

**Disk Tetra Care Level :** Easy

**Size :** up to 16 inches (42 cm)

**Water Parameters :** pH 5 - 7 | Temperature : 73°F - 80°F (23°C - 27°C)

**Lifespan :** 8 to 10 years, likely longer

**Origin / Habitat :** South America, Amazon River basin, Nanay River, upper Orinoco River basin

**Temperament / Behavior :** The Disk Tetra gets big and needs to be kept with similar sized species in a large aquarium.

**Disk Tetra Breeding / Mating / Reproduction :** Open water / substratum egg scatters. (ref: fishbase)

**Tank Size** : 200 gallons or much larger recommended given their potential adult size and because they are a schooling fish

**Compatible Tank Mates** : Keep them with similar sized fish species with similar water requirements.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : In the wild they eat smaller fish, crustaceans, snails, fruits, etc. Get them on a high quality pellet food and supplement with live or thawed freshwater fish preparations.

**Tank Region** : Middle to lower levels.

**Gender** : Not sure how to tell males from females.

**Photo Credit**: Ltshears (wikimedia)

**Author** : Mike FishLore

## EMBER TETRA - HYPHESSOBRYCON AMANDAE



The Ember Tetra (*Hyphessobrycon amandae*) is a light orange with a semi-transparent body. They are on the small side only getting to be about .75 to 1 inch in size as adults. They are found in the Araguaia River basin in South America. Keep them in groups of 5 or preferably more to help promote the schooling behavior and help make them feel more secure. They look really good and will do great in a heavily planted tank.

### Ember Tetra Profile Facts and Care Information

**Scientific Name :** *Hyphessobrycon amandae*

**Common Names :** *Ember Tetra*

**Ember Tetra Care Level :** Easy

**Size :** up to 1 inch (2 cm)

**Water Parameters :** pH 5 - 7 | Temperature : 75°F - 82°F (24°C - 28°C)

**Lifespan :** 2 - 4 years

**Origin / Habitat :** South America, Araguaia River basin

**Temperament / Behavior :** The Ember Tetra should be kept in groups of 5 or more to help promote schooling.

**Ember Tetra Breeding / Mating / Reproduction :** Substratum egg scatters.

**Tank Size :** 10 to 20 gallon minimum recommended (schooling fish)

**Compatible Tank Mates :** Don't keep with fish species large enough to eat them.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** They will accept a good flake food or micro type pellet food.

**Tank Region :** Middle of the tank usually

**Gender :** Not sure how to tell males from females.

**Photo Credit:** Mbdtsmo (wikimedia)

**Author :** Mike FishLore

## EMPEROR TETRA - NEMATOBRYCON PALMERI



The Emperor Tetra (*Nematobrycon palmeri*) does really well when kept in heavily planted aquariums. They may even breed on a regular basis if you have a small group of them. It's recommended to keep them in groups of 5 or more specimens. They are tetras so fin nipping may happen in the community aquarium. Keeping them in a small school should help focus their attentions on each other.

The Emperor Tetra gets to be about 1.5 inches (4.2 cm) and will adapt to a relatively wide range of water conditions regarding pH and dKH. They are tropical so a temp in the mid 70's F is recommended.

### Emperor Tetra Profile Facts and Care Information

**Scientific Name :** *Nematobrycon palmeri*

**Common Names :** *Emperor Tetra, Rainbow Tetra*

**Emperor Tetra Care Level :** Easy

**Size :** 1.5 inches (4.2 cm)

**Water Parameters :** pH 5 - 8.0 | Temperature : 72°F - 80°F (22°C - 27°C)

**Lifespan :** 3 - 5 years

**Origin / Habitat :** South America, Atrato and San Juan River basins.

**Temperament / Behavior** : Similar to other tetra species, they will do well with groups of 5 or more of them. One of the few that will be fine if kept in lower numbered groups though.

**Emperor Tetra Breeding / Mating / Reproduction** : Substratum egg scatters. Reported to spawn more frequently in heavily planted aquariums on the slightly acidic side. Remove the eggs so the parents don't eat them.

**Tank Size** : 20 to 30 gallon recommended (schooling fish)

**Compatible Tank Mates** : Like other tetras they can be fin nippers. Keep them in schools to limit the aggression with other species.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Feeds on worms and crustaceans in the wild (re: fishbase). A high quality micro pellet food like New Life Spectrum can be their primary diet. Bloodworms, black worms and similar live/thawed foods will be good to supplement their diet.

**Tank Region** : Middle to bottom, can be quite active

**Gender** : Some think you can tell by their eye color with males having blue eyes and females having green eyes.

**Photo Credit**: citron (wikimedia)

**Author** : Mike FishLore



## GLOWLIGHT TETRA - HEMIGRAMMUS ERYTHROZONUS

The Glow light Tetra is a really nice looking tetra with an orange-red stripe that runs the length of its semi-transparent body. Proper aquarium lighting levels with a dark fish tank bottom can help enhance the colors of the Glow light Tetra. They are slightly smaller than other commonly available tetras and should be kept with similar sized and non-aggressive species. They will do really well in an aquarium with live plants. Like other small tetras, such as the Neon Tetras, this fish does best in small schools (shoal) of 5 or more. Do not keep them with larger species that could potentially eat them. Even if you keep them in schools they can still be a little shy, keeping a low profile most of the time.

Glow light Tetras are readily available and are usually very inexpensive. There is a golden Glow light and albino variety being offered for sale too.

It's always a good idea to keep your new Glowlights in a quarantine tank for a few weeks for monitoring before introducing them into your main tank. Many of the Glow-light tetras available are now being farm raised but this fish can still be sensitive to fluctuations in pH and temperature. You may want to take a little longer when acclimating them to your tank water. Take an hour (instead of 15 minutes) and slowly add small amounts of tank water to the bag every 10 minutes or so.

This Glowlight Tetra will accept smaller fish food including flakes, frozen, freeze dried and live foods (crickets and worms). They may also eat smaller top dwelling fish.

### Glowlight Tetra Picture



### Glowlight Tetra Profile Facts and Care Information

**Scientific Name :** Hemigrammus erythrozonus

**Common Names :** *Glo-lite Tetra, Glowlight Tetra, Fire Neon Tetra*

**Glow Light Tetra Care Level** : Easy to Moderate, slowly acclimate them to your tank using a slow drip.

**Size** : Up to 1.5 inches (4 cm)

**pH** : 5.5 - 7

**Temperature** : 72°F - 80°F (22°C - 27°C)

**Lifespan** : 5 years or longer

**Origin / Habitat** : Guyana, South America

**Glowlight Tetra Temperament / Behavior** : A very small tetra that needs to be kept in small schools (shoal) of 5 or more.

**Glowlight Tetra Breeding / Mating / Reproduction** : They have been bred in captivity and are egg layers. They need very soft (4 dkh) and water that is on the acidic side. May need subdued lighting levels and live foods to trigger spawning.

**Tank Size** : 20 gallon minimum

**Glowlight Tetra Compatible Tank Mates** : They can be very peaceful and should be kept with similar sized tank mates. Avoid keeping them with larger fish capable of eating them. Does well with the Neon Tetra and the Black Neon Tetra.

**Fish Disease** : Freshwater Fish Disease - use a Quarantine Tank for all new fish!

**Diet / Fish Food** : An omnivore - provide a varied diet with live food, frozen food and they should accept flake food.

**Tank Region** : Middle to bottom

**Gender** : Can be difficult to determine, females are usually a little larger.

**Fish Lore Forum** : Glowlight Tetra Forum

**Author** : Mike FishLore

## GREEN NEON TETRA - PARACHEIRODON SIMULANS



The Green Neon Tetra (*Paracheirodon simulans*) looks very similar to the regular Neon Tetra but only reaches about an inch (2 cm) in size. They will do better when kept in small schools of 7 or more and in slightly acidic and soft water conditions.

This species is not seen in the trade as often as the regular neons or cardinal tetra. Hobbyists are sometimes confuse all three species.

### Green Neon Tetra Profile Facts and Care Information

**Scientific Name :** *Paracheirodon simulans*

**Common Names :** *Green Neon Tetra, False Neon Tetra*

**Care Level :** Easy

**Size :** up to 1 inch (2 cm)

**Water Parameters :** pH 5.5 - 6 | Temperature : 73°F - 80°F (23°C - 27°C)

**Lifespan :** 2 to 3 years, possibly longer

**Origin / Habitat :** South America, Upper Negro and Orinoco River basins

**Temperament / Behavior :** The Green Neon Tetra gets big and needs to be kept with similar sized species in a large aquarium.

**Green Neon Tetra Breeding / Mating / Reproduction** : Open water / substratum egg scatters. (ref: fishbase).

**Tank Size** : 10 to 20 gallon (schooling fish)

**Compatible Tank Mates** : Does well when kept in species only tanks or with other small fish species.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : Will accept a micro type pellet food (NLS) or smaller flake foods. Supplement with daphnia, thawed brine shrimp, etc.

**Tank Region** : Middle to upper levels.

**Gender** : Not sure how to tell males from female.

**Photo Credit**: Cinh (wikimedia)

**Author** : Mike FishLore

## HEAD AND TAIL LIGHT TETRA

The Head and Tail Light Tetra gets its common name from the way two small areas on the body seem to reflect light. One area on the Head and Tail Light Tetra is right behind the eye and the other area is at the base of the caudal fin. It may be hard to see this in tanks with lower lighting levels.

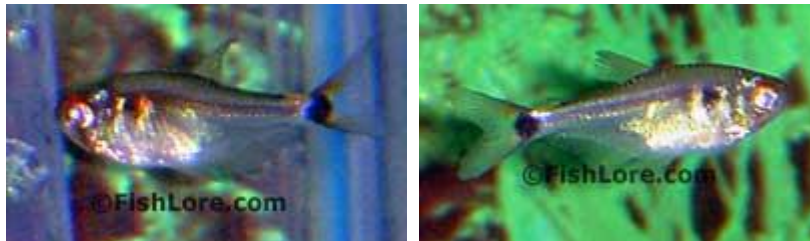
Like other tetras, the Head and Tail Light Tetra likes to be in small schools of 6 or more. They are generally peaceful fish and do really well in live plant aquariums. Water should be kept slightly on the acidic side. Since they come from the slower moving waters in the Amazon Basin it may be a good idea to give them a slower current in the home aquarium as well.

Breeding them in the home aquarium is possible but requires pre-conditioning with live and premium foods. You will need a separate breeding tank for the spawn and then to raise the fry in. Water must be on the soft and acidic side with low lighting levels. Parents should be removed after you see the eggs.

It's always a good idea to keep any new fish in a quarantine tank for a few weeks for monitoring before introducing them into your main tank.

They will accept most fish food including flakes, frozen, freeze dried and live foods.

### Head and Tail Light Tetra Picture



### Head and Tail Light Tetra Profile Facts and Care Information

**Scientific Name :** Hemigrammus ocellifer

**Common Names :** *Head and Tail Light Tetra, Beacon Fish*

**Care Level :** Easy

**Size :** Up to 2 inches (5 cm)

**pH** : 6 - 7.5

**Temperature** : 72°F - 80°F (22°C - 27°C)

**Life span** : 3 - 5 years or longer

**Origin / Habitat** : South America, Amazon Basin

**Temperament / Behavior** : This is a generally peaceful fish and does well when kept in a small school of 6 or more.

**Breeding / Mating / Reproduction** : They have been bred in captivity and are egg layers. Requires acidic water conditions, low lighting levels and pre-spawn conditioning with live foods.

**Tank Size** : 20 gallon minimum

**Compatible Tank Mates** : Similar or smaller sized species that are comparable in temperament to the Head and Tail Light Tetra. Does well with other tetras.

**Fish Disease** : [Freshwater Fish Disease](#)

**Diet / Fish Food** : An omnivore - provide a varied diet with live food, frozen food and they should accept flake food.

**Tank Region** : Middle to Top

**Gender** : Female is more robust than the male, may only be noticeable when ready to spawn.

**Author** : [Mike FishLore](#)

**Fish Lore Forum** : [Head and Tail Light Tetra Forum](#)

## LEMON TETRA - HYPHESSOBRYCON PULCHRIPINNIS

The lemon tetra (*Hyphessobrycon pulchripinnis*) is a very easy to care for fish, that is tolerable to almost any water parameters the common hobbyist maintains. The Lemon Tetra stays a small size of no more than 2 inches (5 cm) and prefer to be in a school of at least 6, which limits them to a minimum tank of 10 gallons. The lemon tetra comes from the Amazon River, and any rivers that flow off of the Amazon River. They will accept a wide range of water parameters, but the ideal parameters include a pH of 6.0 - 7.5, soft water, a water temperature of 70-80°F (21-27°C) and if cared for properly, these fish can live from 6 to 8 years. They are very peaceful by nature and can be put in a tank with anything that will not eat them and with those species having the same water parameter requirements.

Lemon tetras are omnivores and will accept a wide variety of foods from flakes to granules to pellets to frozen foods to live foods to even wafers or sinking shrimp pellets.

Breeding lemon tetras can be difficult since the males and females are fairly hard to tell the gender. The females are more gravid and full of eggs when looked at from above. The female will scatter the eggs and then the male will fertilize the eggs as they fall and adhere to whatever they fall onto.

### Picture



### Lemon Tetra Fish Profile and Care Information

**Scientific Name :** *Hyphessobrycon pulchripinnis*

**Common Names :** *Lemon Tetra*

**Care Level :** Easy

**Size :** 1.5 to 2 inches (3.75 - 5cm)

**pH :** 6.0 to 7.5

**Temperature :** 70 - 80°F (21 - 27°C)

**Water Hardness :** Prefers soft water

**Lifespan :** 6 to 8 years

**Origin / Habitat :** Amazon River

**Temperament / Behavior :** Fairly peaceful, but best kept in schools of 6 or more

**Breeding / Mating / Reproduction :** The Lemon Tetra can be difficult to breed in the home aquarium. They are egg layers and the parents do not care for the fry.

**Tank Size :** Minimum of 10 gallon for just a school of 6 lemon tetras, assuming nothing else is in the tank with them. They need a bigger tank due to schooling preferences when kept with other species.

**Compatible Tank Mates :** Virtually anything that won't eat them or has relatively the same water parameter requirements

**Fish Disease :** [Freshwater Fish Disease](#)

**Diet / Fish Food :** Omnivore, will accept flakes, granules, pellets, frozen foods and live foods.

**Tank Region :** Middle to top of the aquarium

**Gender :** The females when full of eggs are wider when looked at from above

**Similar Species :** All the other Hyphessobrycon species and most of the other Characin species. - see more [Tetras](#)

**Profile and Photos by :** [Tom](#)



## NEON TETRA - PARACHEIRODON INNESI

The Neon Tetra is one of the most attractive of all the readily available tropical fishes. The neon tetra has been getting a bad reputation in recent years for the difficulty in keeping them alive in the home aquarium. This bad reputation could be attributed to the increasing public demand and the methods by which breeders are meeting those demands by the inbreeding of this once hardy tropical fish.

Try to add at least 6 or more neon tetras to your mature, fully cycled aquarium in order to increase your chances of success. Spending a little more time during the acclimation process may help as well. If you do the floating bag method, at least try to add small amounts of the tank water into the bag every 10 minutes so that they can slowly adjust to pH as well as temperature. Float them and add the small amounts of tank water for an hour.

Keep up with those water changes to prevent the nitrate levels from getting too high!

The Neon Tetra, like many other tetras, will accept tropical fish flakes, frozen and freeze dried foods.

### Neon Tetra Picture



### Neon Tetra Profile Facts and Care Information

**Scientific Name :** Paracheirodon innesi

**Common Names** : *Neon Fish*

**Care Level** : Moderate - it's a good idea to stay on top of your water changes to prevent the nitrate levels from accumulating.

**Size** : Up to 1.5 inches (4 cm)

**pH** : 5 - 7.5

**Temperature** : 69°F - 79°F (21°C - 26°C)

**Water Hardness** : 1° to 10° dH

**Lifespan** : 5 - 8 years

**Origin / Habitat** : South America

**Neon Tetra Temperament / Behavior** : Neon Tetras are peaceful tropical fish and best kept in schools of 6 or more.

**Neon Tetra Breeding / Mating / Reproduction** : They are difficult to breed in the home aquarium.

**Tank Size** : 10 gallon or larger.

**Neon Tetra Compatible Tank Mates** : Many, given their peaceful nature. Avoid keeping with tropical fish large enough to eat them.

**Neon Tetra Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Will go after flakes, live and freeze dried foods.

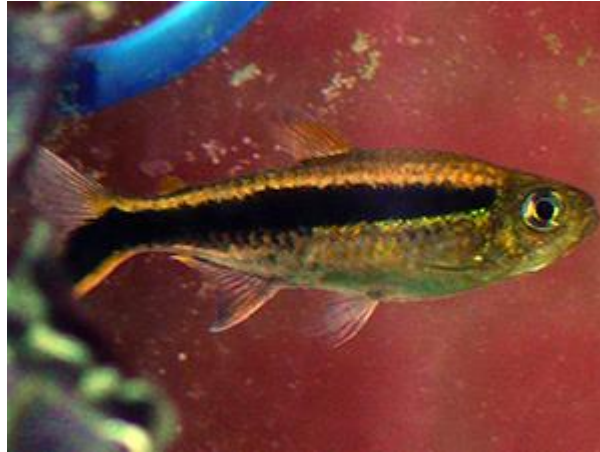
**Tank Region** : Mostly middle to bottom.

**Gender** : The male is usually smaller than a female of the same age.

**Author** : Mike FishLore

**Fish Lore Forum** : Neon Tetra Forum

## PENGUIN TETRA - THAYERIA BOEHLKEI



The Penguin Tetra (*Thayeria boehlkei*) comes from the upper Amazon River Basin and feeds on small worms, insects and crustaceans in the small streams in which it is found. They need to be kept in a small school of 5 or more and with similar sized tank mates.

The Penguin Tetra gets to be about 1.2 inches (3 cm).

### Penguin Tetra Profile Facts and Care Information

**Scientific Name :** *Thayeria boehlkei*

**Common Names :** *Penguin Tetra, Blackline Penguinfish, Hockey Stick Tetra, Penguinfish*

**Penguin Tetra Care Level :** Easy

**Size :** 1.2 inches (3 cm)

**Water Parameters :** pH 6 - 8 | dH range: 5 - 20 | Temperature : 72°F - 82°F (22°C - 28°C)

**Lifespan :** 3 - 5 years

**Origin / Habitat :** South America, upper Amazon River basin in Peru and Araguaia River in Brazil.

**Temperament / Behavior :** Very similar to other tetras. Keep them in groups of 5 or more.

**Penguin Tetra Breeding / Mating / Reproduction :** Get them ready ahead of time by feeding them a high quality diet for several weeks/months. They prefer tank water that is on the softer and

more acidic side of the pH scale. Egg scatterers and the parents will eat the eggs. The female can drop hundreds of eggs that hatch after 20 to 24 hours and fry are swimming after 4 days.

**Tank Size :** 20 to 30 gallon recommended (schooling fish)

**Compatible Tank Mates :** Keep them in groups and don't keep them with fish large enough to eat them.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Small worms, insects, crustaceans in the small streams where they originate. They will go after smaller pellet foods and flake foods. You can and should add in thawed blood worms, brine shrimp and other freshwater preparations.

**Tank Region :** Middle to upper regions of the aquarium.

**Gender :** Not sure of any external characteristics to determine males and females.

**Photo Credit:** Andrew Gray

**Author :** Mike FishLore

## PIRANHA - PYGOCENTRUS NATTERERI

The Piranha is an infamous fish known for its meat eating capabilities and although it is an extremely interesting fish, we do not recommend them for the beginner. The Piranha can get quite large and expensive to feed. I also wouldn't want to put my hand in a tank full of piranhas while performing tank maintenance. Yikes!

Use caution if you plan to feed your Piranha a steady diet of feeder guppies or feeder goldfish since these may introduce many different diseases to your tank. Try to get them on flakes or pellets as soon as possible and only give them live foods as a supplement to their diet.

See the [Piranha Care Sheet](#) on the forum for more details on keeping Piranha.

### Piranha Pictures



*Pictures courtesy of Andreas Sunarso*

### Piranha Profile Facts and Care Information

**Scientific Name :** Pygocentrus nattereri

**Common Names :** Red Belly Piranha, Red Piranha, Red Bellied Piranha

**Care Level :** Moderate

**Size :** Up to 12 inches (30 cm)

**pH :** 6 - 7.5

**Temperature :** 73°F - 82°F (23°C - 28°C)

**Water Hardness** : 10° to 20° dH,

**Lifespan** : 8 - 10 years

**Origin / Habitat** : South America

**Piranha Temperament / Behavior** : A very peaceful fish - just kidding. This is a very aggressive and a very dangerous fish. You need a larger tank for them. They will eat your smaller fish.

**Piranha Breeding / Mating / Reproduction** : Extremely difficult.

**Tank Size** : 55 gallon minimum, even though you see them (juveniles) in 10 gallon pet shop tanks. If you keep them in a smaller tank be prepared to perform more frequent aquarium maintenance.

**Piranha Compatible Tank Mates** : Not many - mainly other Piranhas

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Omnivore - feeding them can become fairly expensive because they prefer live foods. Try to give them flakes and pellet food for their primary nutritional needs and supplement with live foods.

**Tank Region** : Middle

**Gender** : Difficult to determine but the female may be larger and have more yellow in them. We've also read reports that suggest that the female may become darker around spawning time.

**Author** : Mike FishLore

**Fish Lore Forum** : Piranha Forum

## PRISTELLA TETRA - PRISTELLA MAXILLARIS

The Pristella Tetra can be a really good fish for the freshwater fish beginner. These Pristella tetras are fairly hardy and should do well in a somewhat broader range of water parameters than other tetras. The Pristella tetra is very peaceful when kept in small schools of 6 or more. However, they may become skittish if kept with larger tank mates.

Physically, these Pristella Tetras get to be about 2 inches (5 cm) and they are sometimes called the X-Ray tetra because of its almost transparent body. Look for the signature black stripe across the middle of the dorsal fin.

There is an albino Pristella tetra (golden x-ray tetra) that will sometimes be available, but it is not as common as the regular Pristella.

It's always a good idea to keep any new fish in a quarantine tank for a few weeks for monitoring before introducing them into your main tank.

This tetra is a decent eater and will accept smaller fish food including flakes, frozen, freeze dried and live foods.

### Pristella Tetra Picture



### Pristella Tetra Profile Facts and Care Information

**Scientific Name :** Pristella maxillaris

**Common Names :** *X-Ray Tetra, Albino Pristella*

**Care Level :** Easy, good for the freshwater fish beginner

**Size :** 2 inches (5 cm)

**pH :** 6 - 8

**Temperature** : 75°F - 82°F (24°C - 28°C)

**Lifespan** : 5 years or longer

**Origin / Habitat** : Amazon River, South America

**Pristella Tetra Temperament / Behavior** : This is a schooling fish that is usually very peaceful.

**Pristella Tetra Breeding / Mating / Reproduction** : They have been bred in captivity and are egg layers. They will scatter eggs in plants and they should hatch in 24 hours.

**Tank Size** : 10 gallon minimum (schooling fish)

**Pristella Tetra Compatible Tank Mates** : They are generally peaceful but may be skittish around larger tank mates. Best kept in a small school of 6 or more.

**Fish Disease** : Freshwater Fish Disease, be smart and use a Quarantine Tank

**Diet / Fish Food** : An omnivore - provide a varied diet with live food, frozen food and they should accept flake food. They will eat live plants too.

**Tank Region** : Middle to bottom

**Gender** : Can be difficult to determine, female may be more full bodied

**Fish Lore Forum** : Pristella Tetra Forum

**Author** : Mike FishLore



## RED BELLY PACU - PIARACTUS BRACHYPOMUM

The Red Belly Pacu fish looks very similar and is sometimes sold to customers as the Red Belly Piranha. However, Red Belly Pacu only look like piranha as juveniles. The red belly pacu will grow rather quickly and may reach 12 - 24 inches (30 - 61 cm) if properly taken care of. Given their potential adult size you will need an enormous tank to keep one at home, at least 250 gallons (940 liters). You will also need an extremely efficient aquarium filter to filter the tank water.

The Red Belly Pacu will accept flake foods in the home aquarium but will need to be given pellets as they grow in size. It's probably best to keep them in tanks without live plants because they may eat your live plants.

Use caution when selecting tank mates for this fish. Even though they are herbivores, they may go after smaller fish in their tank. They can potentially be kept with arowanas and plecos.

The Red Bellied Pacu one of those fish that is best left to the advanced freshwater aquarist with a very large tank.

### Red Belly Pacu Picture



Photo Credit: Debra Mayo

### Red Belly Pacu Fish Profile Facts and Care Information

**Scientific Name :** *Piaractus brachypomum*

**Common Names :** *Red Pacu*

**Red Pacu Care Level :** Moderate - Difficult (because of adult size) and they need an excellent aquarium filter.

**Size** : 12 - 24 inches (30 - 61 cm)

**pH** : 6.5 - 7.5

**Temperature** : 75°F - 80°F (24°C - 27°C)

**Red Belly Pacu Lifespan** : 5 - 15 years or longer.

**Origin / Habitat** : South America, Amazon River

**Red Belly Pacu Temperament / Behavior** : Generally peaceful and will take care of themselves against more aggressive tank mates. They may also eat smaller fish species if kept in the same tank.

**Red Belly Pacu Breeding / Mating / Reproduction** : Egg layer, not common in home aquariums.

**Tank Size** : 250 gallon (946 liters) minimum but preferably much larger tanks and ponds. This fish is best left in the wild or in public aquarium displays.

**Red Belly Pacu Compatible Tank Mates** : Because of their huge adult size there are very few common aquarium species recommended. You would need to keep them with large fish making the aquarium size requirements difficult to attain in the home. One that may potentially be kept with them is the Common Pleco but you would need at minimum a 350 gallon tank to provide both of them with adequate water volume as adults. Arowanas are sometimes kept in the same tank as well (must be a huge tank). Sometimes sold mistakenly as the Red Belly Piranha.

**Fish Disease** : Freshwater Fish Disease

**Diet / Fish Food** : An herbivore - provide a varied diet with pellet food and frozen food.

**Tank Region** : Mostly middle

**Gender** : Difficult to determine. May only be possible to determine gender differences in mature adult Red Belly Pacu. Males may have more red on the belly.

**Similar Species** : Characins

**Fish Lore Forum** : Pacu Forum

**Author** : Mike FishLore



## COLOMBIAN TETRA (HYPHESSOBRYCON COLOMBIANUS)

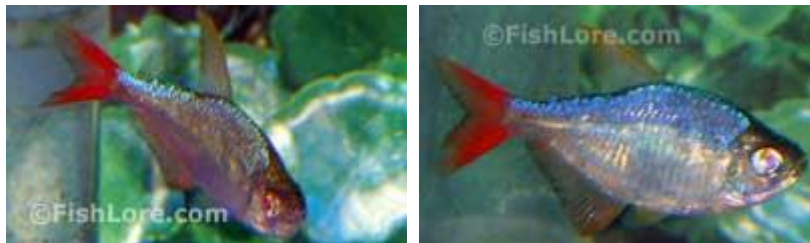
The Red Colombian Tetra is a relatively recent addition to the list of aquarium specimens available for sale. This Colombian Tetra is a somewhat larger tetra than can be semi-aggressive with smaller tank mates and may fin nip fish with larger fins. They do really well in schools (shoal) of 6 or more and may behave better if kept in schools. They come from Colombia, South America - hence the common name.

It is difficult to determine the difference between male Colombian Tetras and females by visible signs, but the female should appear slightly thicker when swelling with eggs.

The Colombian Tetra should accept common aquarium foods such as flake, frozen and freeze dried foods. They are not picky.

It's always a good idea to quarantine your Colombian Tetras before introducing them to your main tank so that you can monitor them for disease and also provide them with optimal water conditions and no competition from other tank mates for fish food.

### Colombian Tetra Picture



### Colombian Tetra Profile Facts and Care Information

**Scientific Name :** Hyphessobrycon colombianus

**Common Names :** Red and Blue Colombian Tetra, Red Tail Mirror Blue Tetra

**Colombian Tetra Care Level :** Easy to Medium

**Size :** Up to 2 inches (5 cm)

**pH :** 6 - 7

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 6° to 15° dH

**Lifespan :** 3 - 5 years

**Origin / Habitat :** Colombia, South America

**Colombian Tetra Temperament / Behavior :** Keep them in small school (shoal) of 6 or more. They can be an aggressive tetra, so avoid keeping them with fish that have larger fins to avoid fin nipping. They may also bully smaller tank mates.

**Breeding / Mating / Reproduction :** They can be difficult to breed in the home aquarium. They are egg layers.

**Tank Size :** 20 gallon or larger.

**Compatible Tank Mates :** Similar semi-aggressive tetras and fish that can take of themselves since this fish can be a bully.

**Colombian Tetra Disease :** Freshwater Fish Disease

**Diet / Fish Food :** Not picky eaters, they should accept flake, frozen, freeze dried and live food.

**Tank Region :** Mostly middle and bottom.

**Gender :** Hard to tell the difference between male and female from any visible signs. Females may bulge with eggs when ready to spawn.

**Author :** Mike FishLore

**Fish Lore Forum :** Columbian Tetra Forum

## RED EYE TETRA - MOENKHAUSIA SANCTAEFILOMENAE

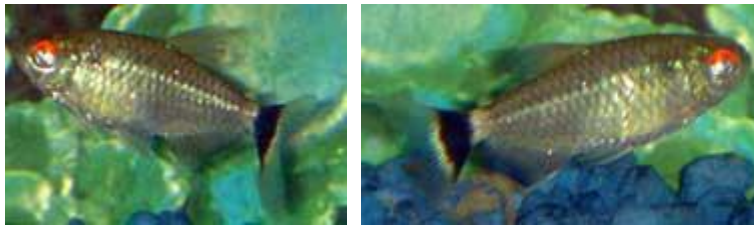
The Red Eye Tetra is a great little tetra that needs to be kept in a school of 5 or more. The Red Eye Tetra makes an ideal member of a planted, peaceful community tank and should bring a decent amount of activity to your aquarium. The top of the eye socket is red, hence the name. The first half of the caudal fin (tail fin) is black and the main part of the body is silver.

The Red Eye Tetra is very peaceful if kept in groups, but may get a little fin nippy if kept as a single. Other tetras may pick on them at times, so keep an eye on them. They do make a great freshwater aquarium beginner fish because they can be relatively hardy and their peaceful nature.

Breeding the Red Eye Tetra can be challenging if not kept in a separate, bare bottom breeding tank. They are egg scatterers and will abandon the eggs and even eat them if not separated.

The Red Eye Tetra should accept nearly all aquarium foods including flakes, frozen and freeze dried fish food. Give them a variety of vitamin enriched foods for best results.

### Red Eye Tetra Picture



### Red Eye Tetra Profile Facts and Care Information

**Scientific Name :** *Moenkhausia sanctaefilomenae*

**Common Names :** *Yellowhead Characin, Yellowhead Tetra, Yellow-banded moenkhausia*

**Care Level :** Easy

**Size :** 3 inches (7 cm)

**pH :** 6 - 7.5

**Temperature :** 75°F - 80°F (24°C - 27°C)

**Water Hardness :** 5° to 20° dH

**Lifespan :** 3 - 5 years

**Origin / Habitat :** South America, Brazil, River Basin areas

**Red Eye Tetra Temperament / Behavior :** A very peaceful tetra that needs to be in a school of 5 or more.

**Breeding / Mating / Reproduction :** They will scatter their eggs on the substrate. The adults may eat the eggs.

**Tank Size :** 30 gallons (114 liters) - this is a schooling fish and should be kept in groups of 5 or more.

**Compatible Tank Mates :** You don't want to keep them with more boisterous or overly aggressive tank mates. They may nip fins if kept solitary.

**Fish Disease :** [Freshwater Fish Disease](#) - Diagnose, Symptoms and Treatment

**Diet / Fish Food :** The Red Eye Tetra should eat most common aquarium foods. Flakes, frozen, freeze dried and may nibble at some aquarium plants.

**Tank Region :** All over, but seems to congregate near protected areas towards the bottom of the tank most of the time.

**Gender :** May be able to tell a difference in males and females when the female gets "fatter" or fuller.

**Fish Lore Forum :** [Red Eye Tetra Forum](#)

## RUMMY NOSE TETRA - HEMIGRAMMUS BLEHERI

The Rummy Nose Tetra is a popular choice for live plant keepers and Discus fish keepers. The rummy nose tetra is very peaceful and can make excellent community tank mates if housed with similar sized and non-aggressive species. They do best in schools of 6 or more and may stress if not provided with hiding places and plants (plastic or real). They have a red colored nose and it can be quite striking to see a school of them swimming around a tank.

The Rummy Nosed Tetra can be sensitive to pH fluctuations so take more time during acclimation and during water changes.

This is one of three species that can be easily mis-identified because they all look very similar. There is the True Rummy Nose (*Hemigrammus bleheri*), the Rummy Nose Tetra (*Hemigrammus rhodostomus*) and the False Rummy Nose (*Petitella georgiae*). The *H. rhodostomus* and *P. georgiae* grow to about 3 inches (8 cm) whereas the *H. bleheri* only reaches about 2 inches (5 cm). The *H. bleheri* will also have more red coloration on the head and appear skinnier than the other species.

For food, they are omnivorous so try to give them a varied diet. They will accept flakes, frozen, freeze dried and smaller live foods.

### Rummy Nose Tetra Picture



### Rummy Nose Tetra Profile Facts and Care Information

**Scientific Name :** *Hemigrammus bleheri*

**Common Names :** *Brilliant Rummy Nose Tetra, Firehead Tetra, Red Nose Tetra*

**Care Level :** Easy to Moderate and can be fairly hardy if acclimated properly. Be careful during water changes to avoid extreme fluctuations in pH and temperature.



**Size :** 2 inches (5 cm)

**pH :** 5.5 - 7.0

**Temperature :** 72°F - 80°F (22°C - 27°C)

**Rummy Nose Tetra Lifespan :** 3 - 5 years

**Origin / Habitat :** South America, Amazon River

**Rummy Nose Tetra Temperament / Behavior :** Very peaceful and should be kept in a small school (shoal) of 6 or more.

**Rummy Nose Tetra Breeding / Mating / Reproduction :** They have been bred in captivity and are egg layers. Requires water on the acidic side of the scale.

**Tank Size :** 20 gallon minimum (keep in small schools)

**Rummy Nose Tetra Compatible Tank Mates :** A very peaceful fish that's best kept in a small school. Try not to keep them with aggressive fish or fish large enough to eat them such as angelfish and Silver Dollar. Often kept with Discus.

**Fish Disease :** Freshwater Fish Disease

**Diet / Fish Food :** An omnivore - provide a varied diet with live food, frozen food and should accept flake food.

**Tank Region :** Middle to bottom

**Gender :** Can be hard to determine, female may be more full bodied

**Fish Lore Forum :** Rummy Nose Tetra Forum

**Author :** Mike FishLore

## SERPAE TETRA - HYPHESSOBRYCON CALLISTUS

The Serpae Tetra is one of the more colorful tetras that sometimes gets a bad reputation for being a fin nipper. This behavior is usually brought on because the Serpae Tetra is not being kept in schools of 6 or more. Provided that you have the room for a small school of these fish, the Serpae can make a good addition to a community tank.

The Serpae Tetra has a brown body, almost amber colored with a black dorsal fin and red caudal and anal fins. They look really good in an aquarium with a lush growth of live aquarium plants.

You can usually find them swimming in a shoal in the middle to bottom regions of your tank. They should leave other fish alone and chase each other playfully around the tank.

Serpae Tetras will accept nearly all fish food such as flakes, frozen, live and freeze dried.

### Serpae Tetra Pictures



### Serpae Tetra Profile Facts and Care Information

**Scientific Name :** Hyphessobrycon callistus

**Common Names :** *Jewel Tetra*, *Red Minor Tetra*

**Care Level :** Easy, good for freshwater beginners

**Size :** 1.5 inches (4 cm)

**pH :** 5 - 7.8

**Temperature :** 72°F - 79°F (22°C - 26°C)

**Water Hardness** : 10° to 25° dH,

**Life Span** : 5 - 7 years

**Origin / Habitat** : South America

**Serpae Tetra Temperament / Behavior** : This tetra is generally peaceful but they are sometimes prone to fin nipping on some of their tank mates. Keeping them in a school of 6 or more may help alleviate this problem.

**Serpae Tetra Breeding / Mating / Reproduction** : Not too hard if the ph is between 6.5 and 6.8.

**Tank Size** : 10 gallon or larger.

**Serpae Tetra Compatible Tank Mates** : Other Tetras, Catfish and Plecos, Swordtails.

**Fish Disease** : Freshwater Fish Disease - Diagnose, Symptoms and Treatment

**Diet / Fish Food** : Omnivore, they will eat many fish foods including flakes, freeze dried and live foods. As with many fish, try to vary their diet for optimum health and colors.

**Tank Region** : Middle to bottom

**Gender** : Hard to determine, but the female may be more round in shape.

**Fish Forum** : Serpae Tetra Forum

**Author** : Mike FishLore

## SILVER DOLLAR FISH - METYNNIS HYPSAUCHEN

The Silver Dollar fish comes from South America and has been a favorite among tropical fish hobbyists for many years. The Silver Dollar gets to be about 6 inches or about the size of a saucer. They are a brilliant silver in color and in some varieties, the male will have a small amount of red on its anal fin. They do best in schools of 6 or more and can become scared easily if not in a school. However, even in small schools they can still be very skittish, especially if you approach the tank too quickly. If you come up too fast or if you make quick movements they may start darting around the tank and could possibly injure themselves. For this reason, make sure that there are no sharp tank decorations in the aquarium.

Silver Dollar Fish are mostly peaceful but can be extremely aggressive eaters. Watching them eat can be fun. Drop an algae wafer into your tank and watch the other silvers chase the one that gets it around the tank. For the plant keepers out there, they are herbivores and notorious for the serious damage that they can do to your live plants.

For food, they will accept most foods including flakes, pellets, frozen, freeze dried and live foods.

The Silver Dollar Fish can be fairly hardy once acclimated, but avoid fluctuating water parameters. When you are doing your water changes try to put in water that is as close to the same temperature as possible and don't let those nitrates get too high!

### Silver Dollar Fish Picture



### Silver Dollar Fish Profile Facts and Care Information

**Scientific Name :** *Metynnis hypsauchen*

**Common Names :** *Silver Dollar Fish*

**Care Level :** Easy, good for freshwater beginners and quite hardy once acclimated. Stay on top of your water changes to prevent nitrates from accumulating.

**Size** : 6 - 7 inches (15 - 18 cm)

**pH** : 6 - 7.5

**Temperature** : 75°F - 82°F (24°C - 28°C)

**Water Hardness** : 8° to 15° dH,

**Life span** : 5 - 10 years

**Origin / Habitat** : South America

**Silver Dollar Fish Temperament / Behavior** : They are generally peaceful. It is best to keep them in small schools of 4 or more. They may become scared easily if not kept in schools.

**Silver Dollar Fish Breeding / Mating / Reproduction** : Breeding them is not very difficult. They prefer broad leaves to lay their eggs on.

**Tank Size** : 55 gallons but preferably much larger since they should be kept in schools.

**Silver Dollar Fish Compatible Tank Mates** : Many, due to their peaceful nature.

**Fish Disease** : [Freshwater Fish Disease - Diagnose, Symptoms and Treatment](#)

**Diet / Fish Food** : Herbivore primarily, but will go after most anything you put in the tank. Give them a varied diet of fish food including algae wafers, flake, freeze dried and live foods for optimum health.

**Tank Region** : Mostly in the middle

**Gender** : The male's anal fin will have a small amount of red on it.

**Fish Lore Forum** : [Silver Dollar Forum](#)

**Author** : [Mike FishLore](#)

## WHITE SKIRT TETRA - GYMNOCORYMBUS TERNETZI

The White Skirt Tetra is a genetic morph of the Black Skirt Tetra. As far as care requirements go, the White Skirts are virtually identical to those of the Black Skirt Tetra.

The White Skirt Tetra is sometimes the victim of fish dyeing. Sometimes you'll come across a fish called a "Blueberry Tetra" or "Strawberry Tetra" and it may be a White Skirt Tetra that has been dyed. Please do not buy these fish! Fish dyeing is a harmful practice and should not be supported.

They need to be kept in a group of 5 or more and may get fin nipped by others. They are fairly hardy and can be a nice fish for the freshwater fish beginner with a cycled aquarium. Since you need to keep them in a small school, you'll need to have at least a 20 gallon tank (114 liters). You can keep less of them in a smaller tank but you may see the White Skirt Tetras fin nipping others in this case.

They will really appreciate a tank with live aquarium plants. The live plants will provide places of refuge and help make them feel more secure.

Give them a good diet of vitamin enriched flake foods with the occasional frozen food as a supplement to their diet.

### White Skirt Tetra Picture



### White Skirt Tetra Profile Facts and Care Information

**Scientific Name :** *Gymnocorymbus ternetzi*

**Common Names :** *Gold Skirt Tetra, White Tetra* - same as the Black Skirt Tetra.

**Care Level :** Easy, can be recommended for a freshwater fish beginner with a cycled aquarium.

**Size** : 2 inches (6 cm), sometimes slightly larger.

**pH** : 6 - 7.5

**Temperature** : 75°F - 80°F (24°C - 27°C)

**Water Hardness** : 5° to 20° dH

**Lifespan** : 3 - 5 years

**Origin / Habitat** : South America, river basin areas

**White Skirt Tetra Temperament / Behavior** : A generally peaceful fish that appreciates being in a school of 5 or more.

**Breeding / Mating / Reproduction** : Egg scatterers. The adults may eat the eggs. You will need a bare bottom breeding tank and will have to remove the adults after they release the eggs.

**Tank Size** : 20 gallons (114 liters) - remember, this is a schooling fish.

**Compatible Tank Mates** : You don't want to keep them overly aggressive tank mates.

**Fish Disease** : [Freshwater Fish Disease - Diagnose, Symptoms and Treatment](#)

**White Skirt Tetra Diet / Fish Food** : This tetra should eat most common aquarium foods. Flakes, frozen, freeze dried and may nibble at some aquarium plants.

**Tank Region** : All over, but mostly in the middle and top.

**Gender** : The female will usually be larger and the male may have a wider anal fin. Females should start to plump around mating time.

**Author** : [Mike FishLore](#)

**Fish Lore Forum** : [White Skirt Tetra Forum](#)

### One Definition of Etiquette:

"The rules governing socially acceptable behavior."

### Forum Guidelines

Anytime a group of people come together and interact there must be rules set in place to make that interaction go as smoothly and comfortably as possible. Rules are there to be enforced and followed, but there are also suggestions that can go along with the rules. Some of the reasons for having etiquette above and beyond the enforced rules are to enable people of various lifestyles, backgrounds, and nationalities to gain equal enjoyment potential from the material.

Online forums are a unique situation for the etiquette guidelines. When speaking to a person face to face one can see their facial expressions, body language, and hear the tone of their voice. When using only text to communicate with other people it becomes much harder to detect things such as sarcasm, jokes, and even seriousness. The etiquette guidelines, if followed, help ensure that everyone enjoys their time spent on the forums rather than getting offended.

Some of the Etiquette guidelines are enforced as rules, such as: no cursing, avoiding flame wars and personal disputes, giving respect, avoiding plagiarism, slander, and keeping civil. Others are left as suggested tools of communication, enforced only if situations become problematic. Some of the suggested tools would include: staying on topic, not cluttering the forum, use of proper grammar, and providing enough information.

As for cursing, unless the forum's 'Terms of Service' agreement explicitly endorses the use of profanity, it is a bad idea to use such language. Foul language is hardly ever acceptable in mature public conversations, such as most forums are intended to be. If you are prone to the use of foul language in your life off the forum (as many of us are) it is probably best to proof read your posts until you get in the habit of not using such language.

Flame wars are probably the worst situation to encounter on a forum. They basically consist of extremely hostile verbal jabs back and forth, which often result in nothing but hurt feelings and juvenile behavior. Flaming another poster for any reason shows an extraordinarily childish level of thinking. Of course these behaviors all lead back to respect.

Personal disputes would include flame wars, but as a whole personal disputes should be kept to private messages between the parties involved and possibly a mediator if needed. It is



extremely immature to allow the people on the forum to know of private disputes. Even better would be to let things go and not have personal disputes in the first place, it saves a lot of hassle.

Often times the number one rule is to respect your fellow posters. "Respect must be earned", we hear that from the time when we are small children, but sometimes it is easier to earn respect by giving it freely. If you exude respect in your posts it will "rub off" onto others and everyone will be happier to visit the forum and more and more people will join, which would make the forum a more fun place to be. After all, aren't those things the goal of a forum, to be a fun, happy, people-rich environments to visit?

Some of the more serious problems would include Plagiarism and Slander. Plagiarism is, of course, the use of someone else's material without their express permission, when not citing the source. If you were to quote a website's information on a subject there are two ways for that to not be Plagiarism:

- A) Cite the source by saying, "I got this from \_\_\_\_\_.com"
- B) Show the website link, "\_\_\_\_\_com"

Plagiarism is a misdemeanor criminal offense in which the innocent party may sue the guilty party in a court of law, for damages. Slander is the other problem that could get actual legal action. Slander is the act of spreading harmful, untrue information. (Ex. Man, everything \_\_\_\_\_ sells is crap. Whereas it would've been better to have said, "Everything I've bought from \_\_\_\_\_ is crap.")

Civility is one of the most encountered violations for forum-goers. Sometimes it can be very difficult to remain civil to folks that annoy, infuriate, embarrass, or appear stupid to you. Situations are always easier if the discussions remain civil.

### Forum Suggestions

The aforementioned etiquette guidelines are all some of the things that are required of members to most online forums. We are about to discuss some of the polite rules to follow on forums, but these polite rules are often not enforced. While most of the yet to be mentioned ideas are not enforced, they are strongly encouraged.

The first is probably the most important. Stay on topic. It sounds simple, but often people read a post and whatever comes to mind they feel they must share with everyone. That is fine to feel and fine to do, but usually is only alright if the person starts their own thread for their thought. It often seems okay to mention the thought in response within the thread, but if sharing the

thought changes the subject of the thread it becomes hijacking. Hijacking occurs when someone changes the subject of someone else's thread and is considered very rude.

Avoiding forum clutter is a very good idea also. If you have a question and post it in one area, that should suffice. There is no benefit to posting the question in multiple areas of the forum. (Most forums have a space to show most recent posts, and as far as Fishlore goes just about everyone checks the entire forum, not just a few areas.) Another form of cluttering the forum is done quite often. When people respond to a post and make multiple separate responses back to back to each other, even if responding to different points of the thread. There is a button for multiple quoting for a reason, it is suggested to use the button rather than jacking one's post count in a rather cluttering manner.

Another thought to keep in mind is that the forum is usually owned by one person or a small group of people. The owners have ultimate decision as to what occurs as far as rules and disciplining rule-breakers. Moderators are the second line of leadership. The moderator team is usually appointed by the administrator (which is often the owner(s)). Moderators are entrusted to handle problems as soon as possible and to be advisors to the administrator. With all of that said, often times people forget that the forum is usually made to please the majority of the people involved in the decision making process. Sometimes those that forget that try to get the forum to meld into what they would be most comfortable with, and are often very self-centered people. That is obviously a very rude behavior.

Grammatical skills are **extremely important** when it comes to online forums. If your message is not easy to understand it will inevitably either be misunderstood or not read at all. If your primary language is not that of the forum you are a member of just do your best and let it be known that the language is not your primary language. If it is the same language as your primary then follow the rules of the language and do not treat the forum as a text message on a cell phone, it is rude and immature.

Providing enough information is one of the hardest things to get people to do. If you are going to ask a question try to include any possible information no matter how minor it may seem, but do so in an organized manner. For example, on our fish forum include the following:

**Q: My fish are sick, what do I do?**

**Response 1:**

- What kind of fish?
- What other kinds of fish are in the same tank?
- How many of each kind of fish are in the tank?

- In what size tank are your fish housed?
- What symptoms are present?
- How has your fish's behavior changed since sickness was noticed?
- How has your fish's eating habits changed?
- How much do you feed the fish?
- What chemicals, if any, do you put in the tank?
- What are your water parameters?
- When was your last water change, what percentage do you do, and how often do you do them?
- What kind of equipment do you use on the tank? (heater, filter, decorations, substrate, etc)
- Have you had problems with other livestock purchased from the same supplier?
- Were there any noticeably sick fish in the supplier's tanks?
- Have any supporting photos that could help?

There are many other questions that could be asked, but you probably get the point, huh?

Now let's talk about a problem that is rampant on forums. Jacking post counts. It is kind of immature to post with the express intent of raising one's post count. We all know each post we make raises our post count, but when posting a large number of insignificant posts just to surpass other's post counts it is considered very much a juvenile behavior. (Saying it is a juvenile behavior doesn't make it alright for juveniles to do!

Some of the self-explanatory actions would include: bumping/reviving dead threads (if it has not been posted on in over a month, start a new thread rather than reviving), taking things personally, and use of proper font. It is considered rude to post messages in all CAPITAL LETTERS. Another good idea is to use an easily read font. If the background is white or gray, use a black font. The default forum font is usually sufficient and there is no need to change it. For example, don't use a light green or pink font on a white background! If you are one of those that need your own special font, realize that you are virtually assuring that no one will read your post.

One of the last situations to be mentioned is, when posting follow-up posts it is considered appropriate only to quote the part of the message that is needed for context of your post. Quoting the entire message when only part of it is needed is a form of clutter for the forum. You can use the forum tools to get the quoted text into your reply, but go into the quoted part and remove everything except for what you need to quote. Tech forums are notorious for this and make it miserable for readers to sift through to find an answer.

A finishing thought for everyone: Etiquette and manners go hand in hand, and if used properly you will appear mature beyond your years. (Unless you're really old, then you'll appear as mature as you look!) Go out there, follow the rules, use as much etiquette as possible, and most of all HAVE FUN!

## References

Thanks go to the following websites for the ideas I gathered from their forum etiquette page:

[www.google.com](http://www.google.com)

[www.mozilla.org](http://www.mozilla.org)

<http://forum.tweakxp.com/forum/Topic130928-29-1.aspx>

## About the Author

Chief WaterChanger (Ross)

### **Aerobic :**

when organisms need oxygen to survive they are called aerobic.

### **AC :**

see Activated Carbon

### **Acan or Acontastrea Coral :**

see Acan Coral

### **Acropora :**

see Acropora Coral

### **Acclimate :**

Acclimation is the process of introducing fish or other animals into new conditions (tank water). This process should be slow with aquarium water testing beforehand to help determine the length of time needed for the acclimation process. More information on Fish Acclimation.

### **Acidic :**

relates to the pH scale where a measurement of the fish tank water under 7 is considered "acidic" and over 7 as "basic or alkaline" and 7 is considered "neutral".

### **Acrylic :**

this is a plastic material used to construct fish tanks, filters and other devices used in aquaria. There are many benefits to using acrylic over other materials. It is light weight, durable, inexpensive, and it can be made to be very clear to look through making it ideal for aquarium use. It is also prone to scratching easily and great care must be taken when scraping algae off the tank walls to prevent the acrylic from scratching. You can buff out scratches but this can be a very difficult project.

### **Actinic Light :**

actinic lighting is aquarium lighting composed of lighting in the blue wave length and it should be able to penetrate deeper into the water than other wave lengths. Often times, you'll hear about saltwater aquarium keepers using a combination of full-spectrum and actinic lighting. Actinic lighting can help set off colors in corals and it can be used to help coralline algae growth.

### Activated Carbon :

sometimes abbreviated as "AC", this is a form of carbon that is used in aquariums to remove dissolved nutrients and yellowing compounds to help clean or polish the aquarium water. It is often used to remove smells in the aquarium as well. It is frequently used on water faucets to filter drinking water too. Activated carbon has a limited lifetime and must be replaced periodically. How often you need to replace your carbon depends on the tank circumstances, such as stocking levels and maintenance regimen. There are various grades of activated carbon with some being better than others when it comes to leeching compounds. Some brands may release phosphates into the water. If you have a reef tank or are experiencing algae problems while using activated carbon, try testing your brand using a phosphate test kit. You may be surprised. Also see the article on [Activated Carbon](#).

Use caution when replacing large quantities of activated carbon in your aquarium. It's a better idea to replace half at a time to prevent light shock to corals.

### Adipose fin :

The usually very small fin between the dorsal fin (top fin) and the caudal fin (tail fin). For example, you can easily see the adipose fin on [Silver Dollar Fish](#) and other [characin fish](#).

### Air Pump :

An aquarium air pump is a device used to force air into aquarium tubing. The tubing is placed into the aquarium (used in conjunction with an air stone) to increase water agitation and for decorative purposes. Who among us didn't have that diver with the air bubbler at one point?

### Air Stone :

An air stone is used in conjunction with an air pump and tubing, the air stone is placed at the end of the tubing in the tank. These "stones" are made out of sand and sometimes lime wood and have various air diffusing capabilities.

### Aeration :

Aeration is usually referred to in the context of "you need to increase the aeration in your tank". This means that you need to increase the surface agitation by using a device to agitate the surface of the tank water. You can do this by using air stones, power heads pointed at the water surface, and via return filters or other aquarium pumps.

### Ahermatypic :

Corals that do not host symbiotic zooxanthellae are called ahermatypic corals. They are also sometimes referred to as the "non reef building" corals. Since they can't derive the benefits from zooxanthellae they usually have more advanced prey capture mechanisms to meet their energy needs.

### Algae :

Algae can be both simple and complex in form with varieties growing on nearly any surface within an aquarium. There are brown diatoms, blue-green algae, green algae and red algae. Sometimes algae is desirable (coralline algae in saltwater aquariums) but most often if it grows uncontrolled can become a nuisance. Algae needs nutrients such as carbon dioxide, phosphates, nitrates and iron. Limiting these nutrients is key to controlling the rapid takeover of your aquarium. Some methods to control algae growth include limiting the amount of fish food entering the water, use live plants, keep less fish in the tank, increase the frequency of your water change routine, invest in a Reverse Osmosis water filter unit to filter out impurities from your tap water, and use aphospate removing medium.

### Algaecide :

A chemical that will kill algae but it may also kill other desirable life forms. Care must be taken if you use an algaecide. This is simply treating the symptoms of a larger problem. Find out why you have an algae problem in the first place.

### Algae Turf Scrubber :

Abbreviated as "ATS", is also referred to as a turf scrubber or algal scrubber. It is a filtration method usually employed in reef tanks where the aquarium water is sent into a separate tank (a sump, for example) and there the water passes over algae mats, cleaning the water in the process. These scrubbers have to be cropped periodically for nutrient export.

### Alkaline :

alkaline relates to the pH scale where a measurement of the fish tank water is over 7 and is considered "basic or alkaline".

### Alkalinity :

Alkalinity you'll usually hear reef keepers discussing. Alkalinity is basically a measurement of how well the water in your aquarium can buffer against a drop in pH. An alkalinity test kit will measure the levels of elements such as carbonates, bicarbonates and some other elements. It is usually measured in units of meq/L or ppm which are essentially the same.

### Ammonia :

abbreviated as NH<sub>3</sub> (one part nitrogen and 3 parts hydrogen), ammonia is released into the aquarium from uneaten fish foods, fish wastes and other biological processes. It is easily measured using an aquarium test kit and is the first reading you'll get at the beginning of the aquarium nitrogen cycle. Ammonia is always being released into the aquarium and adequate biological filtration is needed to prevent the life forms from suffering because it is very toxic to fish. Ammonia is thought to be the number one killer of fish in aquariums, most likely due to aquariums going through the nitrogen cycle.

### Amphipod :

a tiny crustacean that are a food source for many aquarium fish and invertebrates. They can range in size from 2 - 50 mm. Saltwater aquarium keepers sometimes utilize a refugium to culture amphipods.

### Amquel :

this is a chemical used to detoxify tap water of chlorine, chloramine and other harmful metals. You use amquel with new tank water to prevent harming the aquarium inhabitants from these elements.



### Amyloodinium :

the saltwater version of the parasitic single cell organism in velvet disease.

### Anal fin :

the anal fin is on the lower part of the fish, in between the anal opening and the caudal fin (tail fin).

### Anaerobic :

means that there is no oxygen is present or an organism does not require oxygen. Some of the bacteria living on the inside of Live Rock that convert nitrates to harmless nitrogen gas are though to be anaerobic. Sometimes anaerobic conditions can form in the aquarium substrate and if these areas are disturbed, harmful compounds such as hydrogen sulfide can get released into the tank.

### Aquariology :

is the study of fish health and the management of fish health in aquariums.

### Angelfish :

refers to either the Freshwater Angelfish or the Dwarf Saltwater Angelfish or Large Saltwater Angelfish.

### Anoxic :

refers to low oxygen levels in the tank water, such as in the deeper levels of the aquarium substrate where anoxic conditions may be present.

### API :

Aquarium Pharmaceuticals Inc - Most often used to describe the API Master Test kit.

### Aragonite :

a form of calcium carbonate, this term refers to a substrate used in the aquarium to raise or maintain high pH and alkalinity levels. Freshwater fish keepers might use this substrate to **raise** the pH in African Cichlid tanks and saltwater aquarium keepers use it to help **maintain** the pH and alkalinity levels.

### Aquarium :

A container usually made out of glass or plastic (see [acrylic](#)) that is used to hold and view fish, plants and corals.

### **Aquascaping :**

is the process of decorating or arranging your aquarium. This is an artistic term for situating the tank to the needs of both the aquarium inhabitants and the fish keeper and is quite fun. Also see [Rock Scaping](#) and the [Aquarium Aquascaping Ideas](#) article.

### **Artemia :**

see [brine shrimp](#).

### **ATS :**

see [Algae Turf Scrubber](#).

### **Aufwuchs :**

A German term for the tiny crustaceans, insect larvae and other organisms found living in algae and other surfaces.

### **Background :**

is the backside of the aquarium. There are several options available to the aquarist when it comes to aquarium backgrounds. Underwater scene prints and 3D backgrounds are affixed to the outside of the back wall of the fish tank, providing a background when viewed from the front of the tank. You can even paint the outside back wall. Popular color choices are various shades of blue, black, dark green, etc.

### **Bacteria :**

small, microscopic organisms that are present everywhere in the aquarium. Some can be harmful, but most are beneficial and are necessary for the [aquarium nitrogen cycle](#). Use caution when using anti-bacterial medicines in the fish tank since they may be indiscriminate in the bacterias they kill.

### **Ballast :**

is an electrical device used to start fluorescent lamps and for regulating the power flow through fluorescent lights.

**Barb :**

is a type of freshwater fish. Also see [Barbs - Cyprinids](#).

**Bare Bottom :**

a term used when referring to an aquarium lacking a substrate, often used when referring to saltwater tanks. People have bare bottoms with the hopes of limiting nutrients (that could accumulate in sand beds) for growing corals. Others simply like the clean look of a bare bottom tank.

**Benthic :**

means the bottom of a body of water. Benthic dwelling organisms can live on or in the aquarium substrate.

**Betta :**

is a type of freshwater fish. Also see the [Betta](#) fish profile.

**Bio-balls :**

as the name implies, these are small plastic, porous balls that are usually placed in wet/dry trickle filters that help promote the growth of bacteria that aid in the nitrogen cycle.

**Bio-load :**

the sum total of the biological burden placed on the biological filter in an aquarium. An overstocked tank will place a heavy bio-load on the filtration system.

**Bio-wheel :**

this is a part in a bio-wheel filter that provides biological filtration. It is a wheel shaped device that spins using water motion provided by the filter. As the wheel spins it comes in contact with aquarium water and then mixes with air, providing a large surface area for beneficial bacteria to colonize.

**Biological Filtration :**

is the part of the aquarium filter system that promotes or allows the growth of beneficial bacteria that helps filter the aquarium water by breaking down wastes into nitrogen

compounds (ammonia, nitrite, nitrate, nitrogen gas). There are many filtration devices primarily designed for biological filtration such as bio-balls, filter floss, sponge filters, etc. Beneficial bacteria colonies can form on nearly every surface in the tank including the filter, the tank walls, and the substrate. For saltwater aquarium keepers, live sand and live rock can be fantastic biological filters.

### **Birdsnest Coral :**

see [Birdsnest Coral](#)

### **Black Water Extract :**

is a water conditioner that contains peat and it helps provide soft, acidic water conditions for aquariums. Hobbyists keeping fish from the Amazon river locations may be interested in using black water extract to more closely resemble these Amazon river water conditions.

### **Bloodworm :**

a fish food, these are midge larvae that are naturally occurring in the bottom of streams and rivers that make a part of the diet in some fishes. They can be high in protein and can be given as a treat to your fish or to help condition them for spawning. They commonly come in frozen and freeze-dried form.

### **Blackworm :**

a fish food, also see [Tubifex Worm](#).

### **Blastomussa Coral :**

see [Blastomussa Coral](#).

### **Bottom Feeder :**

is a fish that spends most of its time scavenging the substrate for food. Many catfish species, such as [corydoras](#) are bottom feeders.

### **Brackish Tank :**

In between a freshwater tank and saltwater tank is the brackish fish tank. These tanks have water with smaller amounts of dissolved salts and they may try and replicate

locations where freshwater rivers meet oceans. See [Brackish Fish](#) species profiles for more information.

### **Breeding Tank :**

this is a specialized aquarium set up for the breeding of fish. They are often scaled down tanks and breeders run them without substrates and sometimes sponge filters to minimize damage to fry. Having no substrate makes it easier to keep the water conditions optimal and the tanks easier to clean during the frequent water changes that rearing tanks require.

### **Brine Shrimp :**

a fish food, brine shrimp is another good treat for your fish that is easy to cultivate and nutritious. Baby brine shrimp is often fed to fish to condition them for spawning or breeding. For ideas on how to raise your own brine shrimp, please read the [brine shrimp hatchery](#) article.

### **Brood Stock :**

a fish or a fish pair that is used for breeding. Some fish species pairs ([Discus fish](#)) can fetch high prices.

### **Bubble Nest :**

is a nest of air bubbles constructed by the [anabantoid fish species](#) for protecting the eggs. Males usually build the bubble nest and guard the eggs.

### **Buffer :**

is a powder or chemical used to change the alkalinity of aquarium water so that it can resist changes in the aquarium pH. Saltwater aquariums often need buffer agents added because they are skimmed off or used up. These buffering agents usually consist of carbonate and bicarbonate. Baking soda can also be used as a buffering agent.

### **Bysus Gland :**

an organ in clams that secretes bysus threads which allows them to attach themselves to the substrate or other surface.

### **CAE :**

abbreviation for Chinese Algae Eater.

### Calcium :

Ca, is an element needed by corals, clams and certain algae to grow. Natural Saltwater has a range of approximately 380 - 450 mg/L and it can be difficult to keep this level up in an aquarium with calcium consuming corals, clams and algae. There are various ways to keep the calcium levels up. Some popular ways include the use of Kalkwasser and Calcium reactors to dose calcium. You can also purchase diluted calcium chloride (easier but kind of expensive) and dose that way. The problem with dosing liquid calcium is that you have to also use a buffer (carbonate or bicarbonate) when you dose calcium or you risk lower the alkalinity levels. There are two part calcium/alkalinity solutions and you should look into these products if dosing this way interests you.

### Calcium Carbonate :

CaCO<sub>3</sub>, a main component of many rocks, seashells and crushed corals. Saltwater reef tank keepers have to dose or supplement this compound in order for corals to grow. Corals need calcium carbonate to grow.

### Calcium Reactor :

a somewhat complicated piece of aquarium equipment that is used to supplement calcium in saltwater aquariums. A media such as aragonite is mixed with carbon dioxide (CO<sub>2</sub>) in a tube like device which causes the aragonite to slowly dissolve thereby releasing calcium and other important trace elements which is then dosed into the tank. Aragonite dissolves at a lower pH and the carbon dioxide is used to lower the pH. A calc reactor is sometimes used in tandem with a pH controller.

### Candy Cane Coral :

see Candy Cane Coral

### Canister Filter :

is an external aquarium filter that pulls water from the aquarium, forces it through various types of filtering media and then pushes the clean water back into the aquarium. Canister filters allow you to use multiple media types inline. For example, these filters often have multiple media trays. In tray one you could use filter floss to remove debris, in

tray two you could use activated carbon and in tray three you could use another media type such as zeolite to remove ammonia. These filters are often more expensive than other filter types. A decent, less expensive canister filter: [Cascade Canister Filter](#).

### Captive Propagation :

is the process of breeding, growing and raising plants, animals and fish in captive conditions (fish in aquariums) for the purpose of increasing the population of the particular plant, animal or fish.

### CFL :

abbreviation for Compact Fluorescent Light or Compact Fluorescent Lamp. See [Power Compact Light](#).

### Catfish :

is a type of fish that is scaleless, has barbels and is often times a bottom dweller. Some stay on the small side such as [ascorydoras](#) whereas others grow to be quite large like the [Iridescent Shark](#). There are both freshwater and saltwater catfish species. Also see: [Aquarium Catfish Species](#).

### Carnivore :

an animal, plant or fish that primarily eats meat or meaty items.

### Caudal Fin :

is the tail fin on a fish. It is for propulsion. Also see: [Fish Anatomy](#).

### Caudal Peduncle :

is the area directly before the caudal fin (tail fin). Also see: [Fish Anatomy](#).

### Chaetomorpha :

is a algae that grows in saltwater and is used by saltwater hobbyists in a [refugium](#). Chaetomorpha is one of the better types of algae for hobbyists to use for nutrient export. Chaeto is often used in an attached refugium where it grows quickly as it consumes and competes for nutrients with less desirable forms of algae. After it reaches a certain

density or size it can be cropped and removed from the system, providing nutrient export.

### Characin :

one of the fish families that consists of tetras. Also see: [Characin Species - Tetras](#).

### Chemical Filter :

is an aquarium filter type that removes dissolve nutrients from the water. The most common form of chemical filtration in the aquarium is using [activated carbon](#). Also see: [Aquarium Filters](#).

### Chloramine :

NH<sub>2</sub>CL, chloramine is used as a disinfectant in tap water. Most municipalities use either Chlorine and/or chloramine to treat drinking water. These chemicals are harmful to fish and must be neutralized in our aquariums before adding fish.

### Chiller :

is a device that works like a refrigerator and is used to cool the aquarium water. These are external devices and can be quite costly to purchase and operate. For more info, see the [Aquarium Chiller](#) article.

### Chlorine :

element Cl, chlorine is used as a disinfectant in drinking water. It is very toxic to fish and must be eliminated from the aquarium water before use. Chlorine may dissipate if you let the water sit for a day or two, but chloramine may stay in solution. Use a water conditioner that removes both chlorine and chloramine to be on the safe side.

### Cichlid :

is a fish from the Cichlidae fish family. They originate from many different locales including Central America, South America and Africa. There are many species and they can sometimes have very different water parameter requirements. Most are great parents to their young and they can become quite aggressive with tank mates while breeding. For more info, see [Cichlids](#) profile pages.

### Circulation :



refers to the amount of water movement within the aquarium. Water movement is accomplished by using internal pumps (powerheads) and/or external pumps. Water circulation is very important and is often too slow in most tanks. High water movement within the tank can help increase the dissolved oxygen levels by increasing surface agitation and it can keep detritus suspended in the water column for the mechanical filter to pick up.

### Cleanup Crew :

a term for saltwater aquariums, refers to the algae and detritus eating organisms such as snails, crabs, starfish and sea cucumbers. The need for all these animals in the same aquarium is sometimes debated. Sand sifting starfish can make short work of a sand beds, sea cucumbers can release toxic compounds that are harmful to fish and crabs can kill snails for their shells and pick at sessile invertebrates. Some reef keepers like to keep only snails for these reasons.

### CO2 :

carbon dioxide, this is a byproduct of fish respiration and it also sometimes bubbled into freshwater planted aquariums to increase the growth rates of plants in brightly lit aquariums.

### CO2 System :

a carbon dioxide dosing system that bubbles water into freshwater aquariums with plants. In brightly lit aquariums there is sometimes not enough CO2 present in the water from fish respiration and it needs to be added (bubbled) into the tank in order to get better growth rates from aquarium plants.

### Conspecific :

belonging to the same species.

### Coldwater Fish :

are fish species that need to be kept in water temperatures that are cooler than what tropical fish species need. Coldwater fish usually need to be kept in tank water under 70°F (21°C). Goldfish and Koi are good examples of coldwater fish species.

### Cnidarian :

is the term for an invertebrate that has stinging cells called nematocysts. Examples of cnidarians are corals and sea anemones.

### Commensalism :

a form of symbiosis in which one organism benefits from the association but the other organism is unaffected.

### Coral :

aside from being a pretty color, a coral is an animal in the class Anthozoa that has colonial polyps and produces a calcium carbonate shell.

### Coralline Algae :

is a plant form, or algae that needs light and calcium to grow. Encrusting coralline algae can form beautiful shades of purple or pink and will spread over the surfaces of live rock and on tank walls and aquarium equipment.

### Corallivores :

Fishes that primarily eat corals, the Parrotfishes for example.

### Corner Filter :

is an aquarium filter that is placed inside the tank, in a corner, imagine that. A corner filter can provide very basic filtration for an aquarium. Often these are one of the first filters young hobbyists (used to) gain experience with. Also see: Aquarium Filters.

### Crustacean :

is an invertebrate with a hard exoskeleton. Examples of crustaceans include lobsters, crabs and shrimps.

### Cryptocaryon :

this is more commonly known as marine ich or saltwater ick. It is a parasitic infection with very small salt like spots that show up on the body of the fish. It can be deadly to the fish and once you can see these white spots, the infection is in the advanced stages. Prompt action may need to be taken and there are many fish medicines on the market to treat this infection. Also see: Saltwater Fish Disease.

### Cyanobacteria :

considered a nuisance in saltwater aquariums, this is a bacteria that is more commonly called "Red Slime Algae". It is primarily caused by low water flows, high amounts of dissolved nutrients and maybe an incorrect spectrum of lighting. Increase water flows, use a protein skimmer, increase the frequency of water changes, limit nutrients, replace old lights and use Reverse Osmosis or Deionized water for top-offs and water changes.

### Cyprinid :

is a type of freshwater fish. Also see Barbs - Cyprinids.

### Daphnia :

also known as water fleas, this is a nutritious fish food that is found in lakes and streams.

### Dechlorinator :

a water additive used to eliminate chlorine and sometimes chloramine from tap water. This product is used when adding new water to the aquarium since chlorine and chloramine can harm fish.

### Deionization :

is the process of removing ions from a solution (water) using an ion exchange resin. Sometimes used in conjunction with a Reverse Osmosis water filter to remove impurities from tap water before using it in the aquarium.

### Denitrification :

is a process where nitrates are converted to harmless nitrogen gas that escapes at the tank water surface. In order for this process to take place there needs to be anoxic or anaerobic conditions in the aquarium. These anoxic or anaerobic places are usually found in the lower layers of Deep Sand Beds and deep within Live Rock.

### Detritus :

is decomposing organic materials, but you can also think of it as fish waste or uneaten fish food that settles into or on the substrate.

### Detrivore :

organisms (fish and invertebrates) that eat detritus.

### **Diatomaceous Earth :**

a very soft rock made out of fossilized diatom algae that is crumbled into a powder for use in diatom filters.

### **DFS :**

abbreviation for Drs. Foster and Smith which is an online aquarium and pet supplies website.

### **DG :**

short for Dwarf Gourami.

### **DI :**

abbreviation for Deionization. Also see: Reverse Osmosis and Deionization.

### **Diapause :**

usually used in reference to insects, but in our case the killifish. The embryos of killifish can go through a stage of suspended growth or development called diapause.

### **Diatom Filter :**

a mechanical filter that pushes or pulls the tank water through packed diatomaceous earth material which cleans the water, or polishes the water. They can become clogged quickly and are usually only used occasionally to polish aquarium water.

### **Discus :**

is a type of freshwater fish. Also see the Discus profile page.

### **Dinoflagellate :**

is also known as saltwater plankton. Some are photosynthetic and these are called zooxanthellae.

### **Dissolved Oxygen :**

is the amount of oxygen dissolved in the aquarium water for use by the tank inhabitants. It is measured as a saturation level or in ppm. Fish need oxygen in the water for respiration.

### Distilled Water :

the distilling of water is the process where water is heated to a boil, the water vapors (steam) are collected in tubes where they cool and drip into another clean container. Distilled water could be considered pure water in that it removes many dissolved solids, salts and organics. Distillers can sometimes be a pain to clean and it's usually easier to generate pure water using reverse osmosis and deionization. Saltwater aquarium or reef tank keepers may be interested in reverse osmosis units.

### Dither Fish :

these are fish that stay out in the open all the time and in the process will calm and reassure more reclusive fish species that it's safe for them to venture out from their hiding spot.

### Diurnal :

is a plant, animal or fish that is active during the daytime.

### DIY :

abbreviation for **Do It Yourself**. There are many pieces of equipment that hobbyists like to make on their own. For instance, here is a DIY Homemade Algae Scraper.

### dKH :

abbreviation for Degrees of Carbonate Hardness and is a measurement of total alkalinity.

### DOC :

abbreviation for Dissolved Organic Carbon or Dissolved Organic Compounds. DOC is the dissolved carbon compounds in the aquarium water that form as a result of various biological processes that take place in the aquarium. It's difficult to measure DOC in aquariums, so Nitrate was one of the things hobbyists started to use as a guide to know when the DOC's were getting too high. When the nitrates started edging up so too were

the dissolved organics. To remove DOC from your aquarium you will need to do water changes, use chemical filtration and protein skimming in saltwater aquariums.

#### **Dolomite :**

is a carbonate rock composed of calcium magnesium carbonate. Saltwater hobbyists sometimes use this material as a substrate but it takes a lower pH than aragonite to dissolve and may therefore not be as suitable for a marine substrate as aragonite.

#### **Dorsal Fin :**

the fin located on top of the fish. Some fish even have two dorsal fins. Also see: Fish Anatomy.

#### **Dosing Pump :**

is a pump used to regulate and administer a slow dose or drip to the aquarium on a continuous or occasional basis. Kalkwasser is sometimes dosed using a slow drip dosing pump.

#### **Driftwood :**

are old tree branches that are used in aquariums for decoration. It is important to sterilize or "cure" the driftwood before using it in your tank. You can boil it (for a couple of hours) or simply let it soak in an aquarium use only bucket for several weeks. Boiling is quicker and you can usually get it ready after a few hours of boiling. Driftwood will release tannins that can soften the water and also cause a drop in pH.

#### **Dropsy :**

is an accumulation of fluids in the tissues of fish, making the fish appear bloated or the scales to stick out. This is thought to be caused by a bacterial infection brought about by poor aquarium husbandry (dirty water) and improper diets. Also see: Fish Disease.

#### **DSB :**

an abbreviation for Deep Sand Bed. Deep Sand Beds are used in saltwater aquariums for the purpose of denitrification.

#### **Ecosystem :**

can be thought of as an environment or location and all the organisms and animals that make up this environment along with their relationships with each other and their relationship with the environment.

### **Egg Burier :**

is a reproductive method where the fish will dig a pit and the female will release her eggs into the pit and then the male fertilizes them. One of the parents will usually guard the eggs while the other guards the immediate vicinity, keeping any egg eaters away.

### **Egg Layer :**

or Egg Depositor, this is a method of fish reproduction where the female places the eggs in a particular location (vertical surface, plant leaf, inside driftwood, etc.) and the male comes behind releasing sperm to fertilize the eggs.

### **Egg Scatterer :**

is a reproductive strategy where the female fish drops the eggs as she swims and the males releases sperm into the water at the same time. It's not the most efficient strategy since many of the eggs fall into the substrate or get eaten by the other fish. Bare bottoms tanks are highly recommended in order to increase your chances of success when breeding egg scatterers.

### **Endangered Species :**

is an organism, animal or fish that is at risk of becoming extinct. It could mean that the natural population of the animal is dwindling or the habitat of the animal is under serious threat.

### **Endemic :**

means that a fish or animal is native to the particular place or geographical location.

### **Endosymbiosis :**

when an organism lives within the cells of another organism. Also see: [symbiosis](#)

### **Estuary :**

is a body of water connected to the ocean with freshwater rivers flowing into it.

### Euthanize :

to terminate a fish in a painless manner in order to stop its suffering resulting from disease or injury.

### Extinct :

when a species is no longer living.

### Filter :

is a piece of aquarium equipment used to clean the aquarium water through mechanical, biological or chemical methods. Also see: [Aquarium Filters](#).

### Fin Rot :

is a fish disease that causes the fish fins to rot away. This is a bacterial infection that is usually brought about by poor nutrition and poor water quality within the aquarium. It may also be caused by fin nipping coupled with poor water quality. Given good conditions (water, foods and no fin nippers) the fish fins may grow back.

### Fingerling :

is a baby, young, or very small fish.

### Fish Only - FO :

is a term that is often used to describe a saltwater tank that consists of fish only. There are no [live rock](#), corals or other [marine invertebrates](#) present. These are very basic setups and can actually be a little harder to run than tanks employing live rock.

### Fish Only With Live Rock - FOWLR :

is a term used to describe a saltwater tank using live rock. Fish are included in this [saltwater aquarium setup](#), but there are no corals or invertebrates.

### Flashing :

used to describe the quick darting or fish flashing against objects in the aquarium. This can be signs of the onset of a disease known as [ich](#) in your fish. Watch them closely and hopefully, if they are new fish, they are in a quarantine tank where you'll be able to treat them effectively. If not, it may be a good idea to start getting a [quarantine tank](#) ready.



### Flourescent Light :

is an aquarium light that uses electricity, mercury vapor and neon gas to produce ultraviolet light. These lights require a ballast to regulate the electrical flow to the lamps.

### Fluidized Bed Filter :

an aquarium filtration device that forces water through a sand medium. As the aquarium water flows continuously through the sand, beneficial bacteria colonies attach themselves to the sand and it should increase the biological filtration capacity of the aquarium. There can be some potential problems with running these filters. They can become packed and turn into nitrate factories. Mechanical filtration of debris before the water enters the fluidized bed filter should help prevent this from happening though frequent monitoring and maintenance may be required.

### Foam Fractionation :

a method of removing dissolved organics from the aquarium water. Also see: Protein Skimmer.

### Frag :

short for coral fragment, refers to a small piece of coral. Corals can be very expensive and hobbyists will often frag their corals for trading with other hobbyists.

### Frogspawn Coral :

see Frogspawn Coral

### Fry :

can be thought of as free swimming baby fish.

### Full Spectrum Light :

is a light that displays the entire spectrum of visible light, from violet to red. For example, sunlight is considered Full Spectrum.

### FW :

abbreviation for the term "Freshwater".

### GAC :

abbreviation for Granular Activated Carbon.

**Gammarus :**

a freshwater amphipod that is used to feed fish.

**Gang valve :**

a valve that is used with multiple air lines to direct and regulate air flow to each of the tubes.

**GBR :**

stands for German Blue Ram or the Great Barrier Reef in Australia.

**GH :**

abbreviation for General Hardness. This is a measurement for the total amount of dissolve minerals in your tank.

**Genital Papilla :**

is the tube through which the sperm and eggs pass on fish and can only usually be seen during breeding. Angelfish has a genital papilla.

**Genus :**

is a taxonomic group of similar organisms that has one or more species. For example, for the freshwater angelfish, *Pterophyllum scalare*, *Pterophyllum* is the genus and *scalare* is the species.

**GFCI :**

abbreviation for Ground Fault Circuit Interrupter. A GFCI outlet is a safety device that will prevent you from getting shocked or electrocuted. When the circuit detects a difference in electrical flow through the outlet it will trip the circuit, preventing serious damage to the aquarist from happening. These are a must have around aquariums. It's also a good idea to always turn off the electricity to the tank before working in it.

**Goldfish :**

is a type of freshwater fish. Also see the Goldfish profile page.

**GPD :**

abbreviation for Gallons Per Day. This term is often used when referring to how many gallons of water a reverse osmosis filter or RO/DI filter can produce in a day.

**GPH :**

abbreviation for Gallons Per Hour. This term is used when referring to filter turnover or water turn over within an aquarium.

**Gills :**

are used by fish to extract gases (oxygen) from the water. Also see: Respiration.

**Gonopodium :**

is a modified anal fin for reproductive purposes. Also see: Livebearer Fish.

**Gorgonian :**

is an octocoral species that can take on various forms such as branchlike, encrusting or whiplike. Some species contain zooxanthellae, while other gorgonian species do not.

**Gourami :**

is a type of freshwater fish. Also see the Gourami fish species profiles page.

**Gravid Spot :**

is a term usually encountered when dealing with the freshwater livebearing fish. Gravid simply means carrying and developing eggs. The gravid spot is usually a dark spot located near the anal vent and is often easily seen in fishes such as the guppy and swordtails. In Mollies and platies it may be more difficult to see, especially in darker colored fish.

**Green Water :**

the result of an algae bloom, green water can be unattractive to look at but shouldn't harm the fish. The amount of dissolved nutrients in the tank are the primary cause of green water. For ideas on how to correct green cloudy water, please read cloudy aquarium water.

**Grindal Worm :**

sometimes called dwarf white worms, these are white worms that reach about 1/2 an inch in size and they are used to feed smaller fish species and fry.

#### **GSP :**

reference to Green Star Polyps or Green Spotted Puffer

#### **Habitat :**

is the location where an animal, plant or fish naturally lives. It can be important to understand the natural habitats of the animals we keep in order to try and replicate them in the aquarium.

#### **Hard Water :**

is water that contains many minerals, such as calcium and magnesium. When you have hard water (use a test kit) it can be more difficult to regulate the aquarium pH. Reverse Osmosis filters can soften hard water. Some fish species (like many tetras) do better in softer water.

#### **Heater :**

is aquarium equipment that is used to increase or maintain the temperature of the aquarium water. There are many types and varieties of aquarium heaters on the market and it can be a good idea to invest in two lower wattage heaters instead of one higher wattage heater in case of heater malfunctions.

#### **Herbivore :**

is a fish that mainly eats plants, algae, or plant matter.

#### **Hermatypic :**

usually used in reference to corals, it means that the coral has the symbiotic algae zooxanthellae present in their tissue. Hermatypic corals depend on photosynthesis for the majority of their nutrients and appropriate lighting is vital for the proper care of these animals.

#### **HID :**

abbreviation for High Intensity Discharge and refers to high intensity lights such as metal halide lights.

### **Hermaphrodite :**

is a fish or other animal that has both male and female organs for producing eggs and sperm.

### **HITH :**

abbreviation for Hole In The Head, which is a fish disease. Read more on this fish disease here: Fish Disease.

### **HO Light :**

refers to High Output fluorescent aquarium light. HO lighting is gaining in popularity as an economical method for placing high intensity lighting over reef tanks while not adding much heat to the tank water. HO lamps are usually in the 20-60 watt range, sometimes higher. T5 lights are considered HO lights. HO lights may not be as intense as VHO bulbs or Metal Halide bulbs.

### **HOB :**

abbreviation for "Hang on Back" and refers to aquarium equipment that can hang on the back of the tank. Most aquarium products will list in the product description whether or not they are HOB. HOB equipment eliminates the need for running your own plumbing lines outside the aquarium but the downside is that you can easily see the equipment hanging on the back of the tank.

**Hospital Tank** : very similar to and sometimes synonymous with a quarantine tank. A hospital tank is a bare bones setup that is used for treating sick or diseased fish. They usually have a filtration system, no substrate, a heater, some place for the fish to hide (pvc tube maybe), lights and thats about it. The sick fish are held in the hospital tank while they are treated for the infection or disease and once they recover they are released back into the main tank.

### **HQI :**

an abbreviation for High Quartz Iodide and is used when referring to metal halid bulbs. HQI can be in either the single ended or double ended metal halide varieties. The HQI bulbs supposedly burn brighter, with more intensity than standard metal halide bulbs.

### Hybrid Fish :

is a fish that is a cross between two different fish species. There is much controversy and many ethical issues around the inter-breeding of different fish species.

### Hydrometer :

is a device used to measure the specific gravity of the aquarium water. Brackish tank and saltwater tank keepers need this device to monitor specific gravity levels.

### Ichthyologist :

Ichthyology is the study of fishes. An Ichthyologist is the person that does the studying. An Ichthyologist could work for a large aquarium, a museum or a university identifying fish species and documenting fish behavior and habitats.

### ID :

usually short for Iridescent Shark but also for the word "identification".

### Inch Per Gallon :

refers to a rather silly guideline you'll come across that some hobbyists use to stock their aquarium. This "guideline" recommends stocking 1 inch of fish per 1 gallon of water. This is an extremely short sighted rule and only works on very small or juvenile fish. Larger fish species require much larger living quarters. A 1 inch pacu will not last long in a 1 gallon aquarium. Various factors come into play when stocking an aquarium such as fish temperament, how large the water surface is for gas exchange, the type of filter system used, water change regimens, etc. Please don't follow or believe this rule!

### Infusoria :

are tiny organisms (protozoa) and algae that are cultured (grown) and fed to fish fry.

### Ich :

also known as ick or white spot disease, Ich is a very common fish disease. The freshwater ich version is Ichthyophthirius multifiliis and the saltwater ich version is called Cryptocaryon. It appears as small white dots all over the fish's skin. It's actually a parasite that is just below the skin. Ich has a life cycle that consists of a free-living stage and a parasite stage when it attaches to the fish. After it has been attached to the fish for a while, it will break free and settle into the substrate where it will become a cyst, reproduce and multiply many times over. When these cysts mature they can swim and start looking for a fish host. This is a common disease and should be taken seriously if you want to save your fish. It has the capacity to wipe out entire tanks if not treated. There are many products on the market to treat this parasite. Please use a quarantine tank for any new arrivals to prevent an ich outbreak. Also see: Fish Disease.

### Internal Aquarium Filter :

any filter that needs to be operated inside the tank. Examples of internal aquarium filters are the undergravel filter, sponge filter and corner filter.

### Invertebrate :

animals that do not have a backbone. In aquariums, invertebrates are snails, shrimps, crabs, corals, anemones, etc.

### Iodine :

a saltwater aquarium supplement, iodine is used up quickly by the tank inhabitants (corals and invertebrates) and skimmed from the tank via the protein skimmer. It is crucial to use an iodine test kit before dosing iodine in your aquarium. In natural sea water, the iodine concentration is 0.03 - 0.06 mg/L (ppm).

### Jaubert System :

is a biological filtration method first developed by Dr. Jean Jaubert for the Monaco Museum. This system requires the use of a deep sand bed, under which there is a plenum that consists of aquarium water with low levels of oxygen. This system promotes the growth of denitrifying bacteria in the lower levels of the deep sand bed. These denitrifying bacteria convert nitrate to nitrogen gas which escapes via the water surface.

### JD :

Jack Dempsey - A type of cichlid.

### K - Kelvin :

For fishkeepers, the Kelvin scale is a thermodynamic temperature scale used when referring to the color of fluorescent lighting. A candle flame is about 1800°, daylight is about 6500° and a cloudless day could be 10,000° plus. Fluorescent lighting wise 10,000°K bulbs are a crisp white and 20,000°K are more blue in color.

### Kalkwasser :

a German word that translated means "lime water". Kalkwasser is calcium hydroxide that is usually administered using a dosing system. The dosing system can be automated whereby the dose is controlled by the pH levels in the aquarium or it can be a manual process of dosing kalkwasser during water-top offs or slow-dripped into the aquarium. The good thing about kalkwasser is that it will supplement both calcium and help keep the alkalinity level and the pH stable.

### Kalk Reactor :

a piece of aquarium equipment that is used to mix freshwater with calcium hydroxide (kalkwasser) using an automated stirring mechanism in tandem with a slow dosing system.

### Kelvin :

refers to the Kelvin Scale that is used to measure the color temperature of light. Common color temperatures (measured in Kelvin - °K) are 6,000°K, 6,700°K, 10,000°K and 20,000°K. Saltwater Reef tank keepers sometimes experiment with lights of various lighting temperatures to get maximum growth out of their corals.

### Krill :

is a small crustacean that is used to increase the colors in fish. Krill should only be used occasionally as a supplement.

### Labyrinth Organ :

is a specialized organ in the anabantid species that allows them to take in oxygen at the water surface directly from the air.

### Larvae :

after fertilization, the first stages of life for fish and invertebrates. The larvae looks different from the adult form of the organism.



### Lateral Line :

along with being able use their vision to detect fish, food and other objects, Fish can use their lateral line to detect vibrations and other objects in the water. The lateral line runs the length of the fish, from the head to the tail. It is located in the upper part of the body, starting at the head of the fish.

### Laterite :

is a planting soil that is rich in nutrients and minerals that is used for freshwater aquarium plants.

### Lepidophagy :

a feeding behavior in some fish species where the fish will eat the scales off of other fish.

### Lettuce Clip :

a clip with a suction cup used to attach to the inside walls of the aquarium used to feed fish. You can attach seaweeds such as snori for your herbivorous fishes.

### LFS :

abbreviation for Local Fish Store.

### LED :

abbreviation for Light Emitting Diode. Is LED aquarium lighting the future of aquarium light systems? They are still rather expensive at this time (2007) but prices are expected to come down. These LED lights run cooler (no need for chillers?), use less energy and can provide many different lighting configurations. These LED's present some exciting possibilities but prices need to come way down before more hobbyists start using them.

### LPH :

abbreviation for Liters Per Hour and usually refers to the flow rate of aquarium filters or powerheads.

### LPS :

abbreviation for Large Polyped Stony Corals or Local Pet Store.

### Light Meter :

a device that measures light intensity. Also see [lux meter](#).

### Limewood Diffuser :

used like an [air stone](#), a limewood diffuser produces fine bubbles and is sometimes used in [protein skimmers](#), air bubblers, or in the lift tubes of an [undergravel filter](#).

### Livebearer :

refers to fish that have free swimming fry. Also see: [Livebearer Fish Species](#), [Guppy](#), [Mollies](#), [Platies](#) and [Swordtails](#).

### Live Rock :

is rubble that has broken off the coral reef structure and is inhabited by many forms of life that can be beneficial in the saltwater aquarium. Good quality live rock is extremely porous and provides a great location for colonizing bacteria that aid in the [aquarium nitrogen cycle](#). Also see the article on [live rock](#).

### Live Sand :

is sand that is used in saltwater aquariums that is populated with beneficial bacteria, invertebrates and other microscopic life forms that aid in the breakdown and conversion of elements within the aquarium. Live sand can be expensive to purchase (per pound) and a saltwater tank does **not** need to be stocked with live sand from the start. There is much skepticism within the trade regarding live sand manufacturers claims about this product. How can these organisms possibly stay alive in sub-optimal temperatures and little to no oxygen during transport? Regular sand (for saltwater aquariums) is much cheaper (per pound) and will quickly become populated with these beneficial organisms when using live rock over a period of time.

### LR :

abbreviation for [Live Rock](#).

### LS :

abbreviation for Live Sand.

### Lumens :

is the total output of a light source.

### Lux :

is a measurement of the intensity of the light. Sunlight on a clear day is approximately 32,000 lux. 1 lux = 1 lumens/meter<sup>2</sup>

### Lux Meter :

is a device used to measure lux, or light intensity in the aquarium. Coral keepers may use them to determine ideal locations for coral placement within the tank. It's also good to use a lux meter to determine if your aquarium light can provide enough lux for the corals you want to keep.

### Magnesium :

element Mg, atomic number 12, is the third most abundant element in natural sea water in concentrations of 1200 - 1300 ppm. For our purposes, it is used up by coralline algae and other algae during photosynthesis within a saltwater aquarium. Get a magnesium test kit before dosing magnesium in your tank. Mg is closely tied to the calcium and alkalinity levels in sea water as well. Not having enough magnesium could pose problems when trying to maintain calcium and alkalinity levels.

### Mantle :

refers to the top, colorful, fleshy part of the tridacnid clam species, such as the Crocea Clam. The clam mantle contains symbioticzooxanthellae that helps provide nutrition to the clam.

### Mariculture :

is the aquaculturing, farming or raising of fish or invertebrate species using water from the ocean. For example, tridacnid clams are often cultured in canals or raceways that are connected to the ocean to provide a continuous influx of clean saltwater.

### Marine Biologist :

Marine Biology is the study of marine (saltwater) organisms. This includes all the animals, fish, plants, invertebrates, corals, etc. that live in the water. A marine biologist is the one who studies these organisms. Considered a dream job for many saltwater hobbyists.

## Mbuna :

is a common name for African cichlids from Lake Malawi that can be aggressive and territorial. They are a rock-dwelling species of cichlids.

## Mechanical Filter :

an aquarium filter that performs the function of removing the larger, suspended particles from the tank water. If the mechanical filter is not maintained regularly they can become a source for nitrate buildup.

## Metal Halide :

a very high intensity aquarium light (HID) that is used for growing coral in saltwater reef tanks and they are also sometimes used in freshwater planted aquariums. They are about the brightest and most intense light that is currently practical for aquarium use. Metal Halide lamps need special fixtures and ballasts and put out significant heat. Fans and possibly an aquarium chiller may be needed for keeping the tank temperature within acceptable levels. They come in various wattages, anywhere from 125 watts through 1000 watts.

## mg/L :

abbreviation for milligrams per liter and a unit of measurement that is approximately equivalent to PPM.

## Molybdenum :

a trace element in natural saltwater that is used by the symbiotic algae (zooxanthellae) in corals. Also see the Saltwater Aquarium Supplements article.

## Montipora Capricornis :

see Montipora Capricornis.

## Montipora Digitata :

see Montipora Digitata.

## Montipora Spongodes :

see Montipora Spongodes.

## Mouth Brooder :

fish that hold eggs and fry in their mouths. Many cichlids and the Banggai Cardinal fish (saltwater fish) are mouth brooders.

## MTS :

abbreviation for Multiple Tank Syndrome. This syndrome usually afflicts those aquarists that have achieved success with keeping fish. They soon want "just one more tank" in order to keep a different or bigger species. They may not know it at the time, but they will soon get a third tank. The cycle continues until you run out of space or money. This syndrome spreads quickly and takes tremendous willpower to keep in check. There is no known cure at this time.

MTS could also be in reference to Malaysian Trumpet Snail. You've just got to use context to tell which one a member is referring to.

## Mutualism :

a form of symbiosis in which both organisms derive some benefit from the association with each other.

## Mysis Shrimp :

a small shrimp like crustacean that is used as a fish food, especially for finicky eaters such as the Seahorse.

## nm :

abbreviation for Nanometer.

## Nanometer :

abbreviated nm, is one billionth of a meter. It refers to the wavelength of light in aquarium lighting. Different light wavelengths produce different colors. Humans can only view light in the range of 380 nm (violet) to 780 nm (red).

## Nauplii :

used in reference to newly hatched brine shrimp, Nauplii are newly hatched free swimming crustaceans.

### Nematocyst :

the stinging cell, sometimes poisonous, that cnidarians (corals, sea anemones, jelly fishes) release to capture prey or as a defensive mechanism.

### NH<sub>3</sub> :

see ammonia.

### Nitrate :

NO<sub>3</sub>, occurs toward the end of the aquarium nitrogen cycle and can harm fish in high enough concentrations. In tanks without any form of denitrification, water changes are needed to remove nitrates.

### Nitrite :

NO<sub>2</sub>, is the middle step in the aquarium nitrogen cycle where Ammonia is converted to Nitrites and Nitrites get converted into Nitrates. Nitrites are not as harmful to fish as ammonia, but can still be deadly if the fish are exposed for prolonged periods.

### Nitrogen Cycle :

sometimes called new tank syndrome, the aquarium nitrogen cycle refers to the conversion of Ammonia to Nitrite and then Nitrites to Nitrates by beneficial bacteria that form inside the aquarium and in the filtration system. Also see: Aquarium Nitrogen Cycle

### NO :

abbreviation for Normal Output fluorescent lighting.

### NO<sub>2</sub> :

see Nitrite.

### NO<sub>3</sub> :

see Nitrate.

### Nocturnal :

refers to an animal or fish that rests during the day and becomes more active at night or in darkness. The opposite of diurnal.

**Nori :**

a fish food (humans eat it too!) that is used to feed fish that are primarily herbivores. Often sold in dried sheets, it is supposed to be nutritionally superior to many other vegetable type foods that are often fed to fish. You can use a vegetable clip to feed the fish or put it under the live rock in the tank and let the fish nibble at it. Many saltwater tangs like to eat nori too.

**nsw :**

abbreviation for Natural Salt Water.

**NTS :**

New Tank Syndrome - More of an old school term from when less was known about the aquarium nitrogen cycle.

**Nuchal Hump :**

is the large hump on the backside of the head in some cichlid species. The purpose of this hump has not been scientifically determined, but is thought to be used for attracting mates.

**Odontode :**

external "teeth like" growths near body openings found on some fish species like the catfishes.

**Omnivore :**

is an animal or fish that eats both meaty and plant like foods.

**Oodinium :**

is the freshwater version of the parasite that causes velvet disease.

**Osmoregulation :**

is the process fish use of regulating the concentrations of salts (ions) and water across a semi-permeable membrane (the gills) through osmosis and diffusion. As a very over generalized example, there is a much greater amount of salts in the ocean than in the

saltwater fish's body and saltwater fish would dehydrate quickly if not for their specialized gills that can remove salts from the water.

### Overflow Box :

a piece of equipment that hangs on the back of the tank that is used to drain water from the tank into a sump type setup. Hobbyists that don't have a pre-drilled tank for running a closed loop circulation system or sump utilize an overflow box to get the water from the tank and into the closed loop or sump.

### Oxygen :

Just like humans fish need oxygen for respiration. Fish take oxygen out of the water using their gills. Oxygen is dissolved in the aquarium water at the water surface. If oxygen levels drop too low, fish may suffer and even die. To increase the oxygen level in your aquarium, use a powerhead directed toward the water surface to cause agitation. Air stones (attached to an air pump) can also cause water surface agitation, thereby increasing the dissolved oxygen levels. Also know that cooler water can carry more oxygen than warmer water and avoid overcrowded conditions (stock lightly).

### Ozone :

O<sub>3</sub>, is a very unstable gas that is sometimes used to increase the dissolved oxygen content in aquarium water and in conjunction with saltwater protein skimmers in order to increase skimmer output.

### Parasitism :

a form of symbiosis in which one organism benefits from the association and the other organism is harmed.

### PC :

abbreviation for Power Compact and refers to Power Compact Fluorescent lights.

### Pelagic :

for our purposes, this term is usually used when referring to the breeding styles of many marine species. These species essentially release the fertilized eggs into the open ocean



to be carried by the currents. This breeding style can be quite difficult for breeders to successfully raise larvae.

### pH :

this is a water measurement on a logarithmic scale that will tell you if your water is considered acidic, neutral or alkaline. A pH of 7 is considered "neutral", under 7 is considered "acidic" and over 7 is considered "alkaline".

### Phosphate :

PO<sub>4</sub>, consists of Phosphorous and Oxygen, is a primary ingredient for algae. Aquarists should try to limit phosphates in the aquarium water to prevent noxious algae blooms.

### Piscinoodinium :

the freshwater version of the parasitic single cell organism in velvet disease.

### Pleco :

is a type of freshwater fish. Also known as the Plecostomus. See the Pleco profile page for more information on this species.

### Plenum :

mostly used only in saltwater aquariums, this is an open space under a deep sand bed that is used to promote biological filtration in the sand bed.

### Power Compact Light :

is a U shaped fluorescent light that is able to generate more light than standard fluorescent tubes. Power compacts are reported to be more energy efficient while producing more light intensity. They can be a viable alternative for smaller and shallow saltwater reef tanks. They do put off some heat and a fan may be needed. They range anywhere from 9 watts through 96 watts.

### Power Filter :

an HOB aquarium filter that performs mechanical filtration, biological filtration and chemical filtration. It performs mechanical filtration by pulling in tank water and forcing it through filter floss. Chemical filtration is accomplished by using activated

carbon inside the filter floss. The better power filters also have a coarse media that the water flows through as it exits the power filter. This coarse media is a colonizing area for the beneficial bacteria that perform biological filtration. These aquarium filters are very popular because they are inexpensive, easy to maintain and do a decent job. It is important to replace the filter floss (not the bio-filter) when needed to prevent nitrates from accumulating in the filter.

### Powerhead :

is aquarium equipment that is used to perform water movement inside the aquarium. Powerheads can be great if you don't want to run plumbing lines to an external water pump. Powerheads are also sometimes used with a UGF to create a reverse flow undergravel filter. There are some drawbacks to using powerheads inside your aquarium. They can add heat and using several can be a problem if tank temperature is staying too high. The water intake strainer needs to be cleaned on a regular basis to perform at peak efficiency and having several in a tank can be a bit distracting and take away from the beauty of a tank (personal opinion of course).

### PPM :

Parts Per Million, is a unit of measurement used in many test kits and is equivalent to mg/L.

### Protein Skimmer :

a saltwater aquarium filtration device used to remove dissolved organics from the water using a process called foam fractionation. The protein skimmer pulls in water from the fish tank and then agitates it thereby forming tiny microbubbles. These tiny microbubbles attract the dissolved organics on the bubble surface. As these bubbles accumulate they are slowly forced upwards into a skimmer collection cup. Frequent maintenance is vital for the proper operation of a protein skimmer. The collection cup, the riser tube the bubbles travel up through and the water intake into the skimmer should be cleaned frequently to keep the skimmer operating a peak capacity. Protein skimmers help by removing these dissolved organics before they have a chance to turn into nitrates. If these dissolved organics are not removed from the water column they can cause problems such as nuisance algae growth, yellowing of the water, and an overtaxed biological filter.

### Protogynous Hermaphrodite :

when a species begins life as a female and changes to a male. Often only a one way change, (i.e they can't change back to female) that can be triggered by the death of the lead male in the harem, the dominant female will turn into a male. The change process can take weeks to months to complete.

### Pulsing Xenia :

see [Pulsing Xenia](#) for detailed information - a coral with polyps that pulse.

### PWC :

abbreviation for Partial Water Change. More info on [aquarium maintenance](#).

### PVC :

Poly Vinyl Chloride, is a hard plastic type material used in plumbing aquariums and for routing water throughout multiple systems.

### Quarantine Tank :

is a bare bones aquarium that is set up for housing new fish, invertebrates or corals for several weeks so we can monitor them for pests, parasites or disease. Using a quarantine tank is highly recommended and can save countless headaches and money. Trying to catch a diseased fish in a tank full of live rock is not our idea of fun. Quarantine tanks allow you to not only monitor new arrivals for disease but it also allows the fish to more slowly acclimate to captivity (saltwater species) and we have a chance to bulk them up a little bit with some good foods before we introduce them to the main tank. More information on [Quarantine Tank](#).

### QT :

abbreviation for Quarantine Tank.

### Reef Tank :

is a type of saltwater aquarium that is used to keep saltwater corals and other invertebrates. The reef tank often requires much higher lighting and more pristine water conditions than a [fish-only](#) or [fowlr](#) aquarium. [Live rock](#) and [live sand](#) is used as a food source for many of the invertebrates in these systems and as the primary biological filter.

Temperature, Salinity (specific gravity), pH, Calcium and alkalinity are some of the constantly monitored parameters in reef tanks since the organisms can be more difficult to keep than fish. Since reef tanks use much more intense lighting than standard fish only or fowlr tanks, nitrates and phosphates need to be kept at extremely low levels to prevent algae from growing all over the aquarium. Reef tanks are the ultimate setup for many hobbyists, but they can be very expensive and challenging to setup and maintain. RESEARCH is your best friend if you're interested in how to set up a reef tank.

### Refractometer :

there are several different types of refractometers, but for our purposes it is a device or piece of aquarium equipment used to measure the salinity of water. You place a drop or two of aquarium water on a prism and then while pointed at a light source, you view through the eye piece on the other end of the refractometer (opposite the prism) a reading of the salinity level. As the light passes through the water and prism it is bent or refracted. These refractometers are considered more accurate than the less expensive hydrometer because they can be recalibrated easily using pure water such as Reverse Osmosis or Distilled water.

### Refugium :

is usually a separate tank that is inline or connected to the main aquarium, but it doesn't have to be connected. A refugium is used to grow and harvest organisms (plants and animals) for feeding the animals in the display tank. The refugium is separated from the main tank because these organisms would not be able to grow their populations because of predation in the main aquarium. These animals are protected in a place of "refuge", hence the term refugia or refugium. By being inline or connected to the main tank, the refugium can be a place where you can grow beneficial macro algae that can aid in nutrient export from the system. You could also use the refugium as a place to grow macro algae and periodically cultivate it for feeding to your Tangs or Surgeonfish. Essentially, refugiums can be anything that you want them to be.

### Respiration :

is the process fish use to extract oxygen from the water in order to live.

### Reverse Osmosis :

is a water filtration process where water is pushed through a semi-permeable membrane. This membrane only allows certain types of atoms to pass through the membrane and stops the "bad" atoms from passing through. Reverse osmosis water can sometimes be 90% more pure than regular tap water. Sometimes an RO unit is used in conjunction with a Deionization filter.

#### Ricordea Florida :

see Ricordea Florida

#### RO :

abbreviation for Reverse Osmosis. See: Reverse Osmosis and Deionization for more information.

#### Rock Scaping :

is the process of decorating or arranging the Live Rock in a saltwater aquarium. Also see Aquascaping

#### RTS :

abbreviation for Red Tail Shark. See the profile and care information for the Red Tail Black Shark.

#### RTBS :

abbreviation for Red Tail Black Shark. See the profile and care information for the Red Tail Black Shark.

#### SAE :

short for Siamese Algae Eater.

#### Salinity :

is a measurement of the total amount of dissolved salts in saltwater.

#### School :

refers to the grouping behavior that certain fish species practice in order to avoid predation.

### Sessile :

refers to organisms (invertebrates) that do not freely move around the tank (immobile) and they are attached to the substrate, live rock or other surface.

### SG :

abbreviation for Specific Gravity.

### Spawn :

can be considered the period of time while fish are reproducing (breeding). It can also refer to the fertilized eggs or the release of eggs into the water column for fertilization.

### Specific Gravity :

is a weight ratio of one liter of some substance compared to one liter of water and is temperature dependant. Specific gravity can be measured with a hydrometer. Saltwater aquariums need to be in the 1.021 - 1.025 range.

### Spirulina :

used as fish food, is a type of blue-green algae that is good for feeding to herbivorous fish.

### Sponge Filter :

is an internal aquarium filter that is very popular with fish breeders for their easy maintenance and durability. It basically performs mechanical filtration and biological filtration. These filters consist of a sponge material that is attached to a powerhead like device that pulls aquarium water through the sponge. Larger particles are trapped in the sponge and beneficial bacteria can grow on and within the sponge. To clean a sponge filter all you have to do is ring it out in discarded tank water and it should be ready to go again.

### SPS :

abbreviation for Small Polyped Stony Corals.

### Strontium :

a trace element in natural saltwater that aids in calcereous algae growth. Also see the Saltwater Aquarium Supplements article.

### **Substrate :**

is the bottom of the aquarium and usually consists of gravel, sand or mud (saltwater aquariums).

### **Sump :**

is an aquarium that is connected to the main tank, often hidden below or behind the main display aquarium, that is used to increase the total amount of volume in the system and used to hide equipment such as protein skimmers, heaters, aquarium filters, chillers, etc.

### **Surgeonfish :**

The Tang or Surgeonfish is common name for a saltwater fish species. They are nick named surgeonfish because of the scalpel like growths (blade like) at the base of the caudal peduncle which they use for aggression and defense.

### **SW :**

abbreviation for Salt Water.

### **Symbiosis :**

is when two different types of organisms live in close association (i.e. together). There are several different classes of symbiosis: mutualism, commensalism, parasitism, amensalism, neutralism and competition.

### **T5 HO :**

a newer type of High Output flourescent light that is 5/8 inch in diameter and is more effecient than standard T12 flourescent lights. These lights require a special ballast and are slimmer in size, allowing you to put more light over the tank. Typical life spans for a T5 bulb is reported to be in the 18 - 24 month range. HO T5 lights are gaining in popularity with Saltwater reef tank and freshwater planted tank hobbyists because they can grow some of the more light demanding species without adding too much heat. T5 hoods have fans that pull heat out the sides of the hood.

## TDS :

is an abbreviation for Total Dissolved Solids. You can measure the amount of total dissolved solids using a TDS meter. Reef tank keepers use a TDS meter to track how well their reverse osmosis or RO/DI filter is running and the measured level of total dissolved solids using a TDS meter can indicate when it is time to replace these RO or RO/DI filters.

## Tang :

The Tang or Surgeonfish is common name for a saltwater fish species. They are also known as surgeonfish because of the scalpel like growths at the base of the caudal peduncle which they use for aggression and defense.

## Target Feeding :

is a feeding process for filter feeders (corals) where you use a turkey baster (or something similar) to deliver the food directly to the animal. Slowly push the bulb on the baster to allow the food to cloud over the filter feeder.

## Taxonomy :

is the scientific practice of classifying of naming animals by species. The most famous taxonomist was Carl Linneaus.

## Temperature :

for fish tank purposes, temperature refers to how hot or cold the tank water is. We measure temperature in degrees Fahrenheit (°F) or degrees Celsius (°C). While keeping fish and invertebrates it's important to have slow temperature variances. Temperature swings in either direction that are too drastic can be quite stressful for fish. An aquarium heater and aquarium chiller are used to keep the tank water within a certain range.

## Timer :

refers to an electrical device that incorporates an internal clock to turn the devices on that are plugged into it. We highly recommend a timer for your aquarium lights. You can achieve some cool effects with a multi-timer device. For instance, if you have a light hood with full spectrum bulbs and actinic bulbs you could have the actinics come on at 10 am and stay on until 10 pm to achieve a sunrise and sunset effect. The full spectrum bulbs could come on at 12 pm and stay on until 8 pm.



## Trace Elements :

is used in reference to saltwater for our purposes. Trace elements in natural saltwater are those elements that are present in less quantities than the major elements that make up saltwater. These elements may be less in quantity or (PPM) but can be just as important. Examples of trace elements in NSW (natural salt water) that are supplemented in saltwater aquariums include Iodine, Molybdenum and sometimes Iron.

## Triggerfish :

a type of saltwater fish. See Triggerfish page for a list of fish profiles.

## Trickle Filter :

an aquarium filter that incorporates a type of wet-dry filtration. Aquarium water is dripped (trickled) over plastic bio-balls (various types of media available) that are partially exposed to air. This type of filtration enhances the biological filtration in the filter.

## Tubercles :

refers to the small white dots or pimple like growths around the gill covers of male goldfish. Can be used as an indicator in determining the gender differences in Goldfish and Koi.

## Tubifex Worm :

a fish food, tubifex is a worm that is fed as an occasional treat to fish that is high in protein and other nutrients. Breeders will sometime use this in conjunction with other high quality foods to prepare their fish pairs for breeding. Live tubifex worms will quickly spoil if not kept in clean conditions and if that happens dispose of them, don't put spoiled worms in your tank. They also come in freeze-dried form, although they may not be as nutritious as the live version, they are much easier to keep and administer in freeze-dried form.

## Turn Over :

refers to the amount of water flow through a filter or the total amount of water movement within the tank. For example, if your filter is rated at 300 GPH and you have a 55 gallon aquarium, your turn over rate is 5.5. This simply means that you "turn over" the tank water 5.5 times per hour.

## UGF :

abbreviation for Under Gravel Filter.

## Ultraviolet Sterilizer :

is aquarium equipment used to kill harmful parasites or other organisms in aquarium or pond water to prevent disease and algae problems. The UV Sterilizer works by slowing passing aquarium water over an ultraviolet light. The ultraviolet light reportedly destroys the cell structure of the organism, thereby killing it. Also see the [UV Sterilizer](#) article.

## Under Gravel Filter :

is an [internal aquarium filter](#) that consists of plates that are placed under the substrate with rising corner tubes. Inside these corner tubes are air lines with attached [air stones](#) at the bottom. The air lines are attached to an [air pump](#). The rising air bubbles create current that pulls water down through the gravel and up through the corner tubes attached to the undergravel plates. These filters were the popular choice back in the day, but have fallen out of favor with some of the easier to maintain aquarium filters of today (power filter). A UGF filter can perform [mechanical filtration](#), [biological filtration](#) and [chemical filtration](#). You can also set these UGFs up to do a reverse flow using a powerhead.

## Venturi Valve :

used in [protein skimmers](#), a venturi valve draws in air and mixes it with aquarium water to create tiny micro-bubbles.

## Vegetable Clip :

a small clip with a suction cup that attaches to the aquarium glass that allows you to conveniently feed fish foods such as [nori](#) as well as other fish foods.

## VHO :

stands for Very High Output and refers to fluorescent aquarium lighting. They typically range from 75-160 watts. These usually produce more heat than [HQ](#) fluorescent bulbs and a fan (or an [aquarium chiller](#)) is needed to keep the tank temperature within an acceptable range.

## Velvet Disease :

also known as Coral Fish Disease, velvet disease is caused by single cell organisms (Amyloodinium in saltwater fish and Piscinoodinium or Oodinium in freshwater fish). This disease can look very similar to ich or white spot disease, but velvet looks more yellow or gray and "dust like" instead of salt like. Velvet can be difficult to eradicate and a separate quarantine tank may be needed. There are many fish medicines on the market to treat velvet. Also see Fish Disease.

## Water Change :

refers to the process of removing a percentage of the aquarium water in order to improve water conditions for your fish. Unlike a fish's natural environment, aquariums are enclosed systems that quickly become polluted with biological substance buildup and dissolved organics. A water change is a good way of reducing the number of pollutants in aquarium water. Frequent and small water changes are considered better than infrequent large water changes. Also see: Aquarium Maintenance.

## Water Parameters :

refers to the measurement of various levels in the aquarium. For example, aquariums that have been recently set up need to have their ammonia and nitrite parameters measured frequently in order to monitor the nitrogen cycle. Some other important water parameters that are frequently measured include temperature, pH, nitrate, phosphate, calcium, magnesium, alkalinity, etc. Measuring water parameters such as these will give the aquarist a general idea of the water quality in the aquarium.

## Water Pump :

is aquarium equipment that is designed to move water in an aquarium. External water pumps are used to pull water from the aquarium and send it to sumps or refugiums. After the water passes through the sump or refugium it is pushed back into the tank. Water pumps are also used in closed loop circulation systems that are designed to increase the water movement within the aquarium.

## Wave Maker :

is an aquarium device that is designed to simulate waves in the aquarium. Most often used in saltwater aquariums, there are stand alone products that pull in water and once

the water reaches a certain level in the wavemaker, it is quickly released back into the tank, creating a surge or wave. Multiple powerheads connected to a switching device that turns the various powerheads on and off in intervals can achieve a similar effect but the constant tripping of power to powerheads can cause accelerated wear and tear on the powerheads.

### WPG :

abbreviation for Watts Per Gallon and used in reference to aquarium lighting. Light intensity and aquarium depth are more important factors than Watts Per Gallon. WPG is a crude rule for estimating the amount of light needed for various organisms such as freshwater aquarium plants, corals and other invertebrates.

### Wet-Dry Filter :

is an aquarium filter that incorporates a dry portion (air) in the filtration process. The exposure to the air increases the biological filtration capabilities of the filter. Trickle filters and bio-wheel filters incorporate a wet-dry filter portion.

### White Spot Disease :

see Ich.

### Yellow Water :

forms as a result of large amounts of DOC, which are Dissolved Organic Carbons. To remove DOC you will need to do more frequent water changes, use or replace the chemical filter (activated carbon) and perhaps lower the bio-load in the aquarium.

### Zeolite :

is a mineral that is used in the chemical filtration component of aquarium filters. Zeolite is used in aquariums to remove ammonia from the tank water.

### Zoanthid :

see Zoanthids, also known as zoas or button polyps.

### Zooplankton :

are tiny organisms that are a food source for many animals in the ocean.

## Zooxanthellae :

is a dinoflagellate that lives within the cells of various corals. They provide corals with carbon compounds (energy) which the zooxanthellae derive from photosynthesis.