Waterlife® Est 1968

Tropical Freshwater Guide

Introduction

Waterlife Research, as the name suggests, has spent over 50 years tirelessly researching and developing products to make fishkeeping easier for you and more enjoyable for your fish! Waterlife has a complete range of water management products, including test kits and products for adjusting water chemistry to help keep your fish disease free. Also, in the unlikely event of a fish becoming ill, Waterlife will almost certainly have a cure.

Getting started

The first place to start is your local aquatic outlet. Take time to wander around and look at the species available. Talk with your dealer and discuss the fishes you would like to keep. Some species should be kept on their own where others are peaceful and ideal for a community aquarium.

As with all animals, their individual requirements differ and you should make sure your choices are compatible. Before making a final commitment, it is advisable to buy a good book and read about the fish's needs.

The Ramerizi (Ram) Cichlid is found in S. America - Colombia, Venezuela, in water with a pH around neutral to slightly acidic. It can reach up to 7.5 cm, but is often smaller and is considered to be a good community fish but prefers an established aquarium.

Do I need a filter?

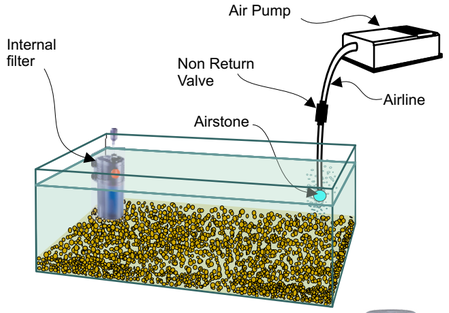
It is important to understand that your aquarium is a self contained eco-system, with no external influences other than the food you add and the water you take out or put in. The filter plays a very important role in keeping the water healthy. It purifies the water using natural bacteria to break down harmful toxic fish waste and makes it safe. As you may be aware, there are many aquaria and types of filter available to you. Be guided by your local shop as to the most suitable but always try to buy the largest and best you can afford as you will find it easier to keep the aquarium healthy.

Setting up

First of all make sure the aquarium is sited away from draughts, radiators and direct sunlight. If you are going to place the tank upstairs make sure the floor is strong enough to take the weight. A litre of water weighs 1 kilo. so a 90 litre aquarium will weigh approx. 90 Kilos.

NB. Allow for the weight of tank, hood, stand, gravel rocks etc.

Place your tank on a strong flat surface, preferably a proprietary aquarium stand, recommended by the tank manufacturer. If your tank is of the all glass, flat bottom design, make sure you interspace a sheet of polystyrene between tank and stand to absorb any unevenness. If this is not done your tank may crack when you fill it. Check with your aquatic shop for your specific requirements. Wash your gravel thoroughly, making sure you use lime free gravel if you want to keep soft water species (see, ***Native water conditions***). Put the gravel / decorations in the tank. Place your filter and heater in position. Fill the aquarium with temperate water.



Add **Waterlife Haloex** (dechlorinator and water conditioner) and a double dose of **BacterLife,** supplement, required to help start the filter.

Turn heater and filter on.

It is advisable to leave the aquarium running for a couple of days before adding fish so you can establish everything is working and the water has stabilized at the right temperature. Discuss the time frame with your shop.

Plants may be added before the fish, (see ***Plants***).

Native Water Conditions

Although the varieties of fish and plants on offer in the shop will be from various parts of the world, there are in essence 2 groups of freshwater fish available to you:

1. Soft, acid water loving species which typically come from regions of South East Asia and South America
2. Alkaline loving water species from river estuaries, African lakes for example.

The water pH and hardness are the predominant differences between these groups.

What is water pH & Hardness?

pH is the measure of acidity or alkalinty. pH 7 is neutral, below 7 is acid and above 7 is alkaline.

Hardness is the measure of dissolved solids in the water. Hardness is usually measured as GH - General Hardness (= calcium and magnesium content) & KH - Carbonate Hardness or buffering capacity (= carbonates, bicarbonates or artificial buffer content).

Artificial buffers are substances which are used to maintain a particular pH. An example of this is **Waterlife 7.2 Buffer** which increases buffering capacity (measured as KH) and stabilises pH to 7.2.

Why check these differences you might say? Fish have adapted (over thousands of years) to thrive in certain water conditions.

A failure to reproduce these conditions may result in stress, poor colouration, a failure to breed etc.

However a more likely outcome is that the fish will become sick.

Some examples of fishes requirements can be seen below

Group 1.	**Group 2.**
Soft, acid water	Hard, Alkaline water
Temp: 24 - 26:	Temp: 24 - 26
Tetras, Rasboras, most catfish, Angels, Discus etc.	Mollies, chromides, Malawis, Monos, Scats etc.

NB. Whilst the species mentioned are water compatible, they may not all be temperament compatible.

Consult your shop for further advice on specific species.

Malawis - Zebra Pseudotropheus. Originally from Africa, these fish are best kept in large numbers in a "species only" aquarium. Plenty of rock work in the tank is advised to define territories. Malawis prefer hard alkaline water and can reach around 12cm in length.

Acidity / alkalinity can be easily measured with **Waterlife's Broad Range pH** test kit.

Humaquat and **Waterlife's 6.5 Buffer** can be used to establish soft, acid water conditions.

Our **7.2 Buffer** can be added to create a neutral to slightly alkaline environment. Finally, **Waterlife's 8.3 Buffer and Pondsal/tonic salt** will re-produce hard, alkaline, salty water. Using pH products will alter the pH and hardness in the tank, creating a healthy and stable environment.

Plants

Having made the decision about the type of fish you wish to keep and adjusted the pH accordingly, you can now choose your plants . You have a choice between live aquatic plants or the plastic synthetic varieties. If you decide to grow live real plants, here again, as with fish, you should try to buy the correct species for your tank. Some plants prefer cooler deeper water while others prefer bright conditions. Remember, to grow plants successfully you need at least 7 to 10 cm (3 - 4 inches) of substrate (gravel). Most plants do not like fast moving water, so do not use them to hide the filter. Plants do not like extreme heat either so never place your plants near your heater. Bog wood or rock / slate may be used to hide equipment but be careful not to block water flow.

Choose your rocks carefully, as some types affect pH and are toxic.

It is always best to plant up in strands of 3, certainly no more than 6.

Grouping more than this together may result in the plants rotting at the stems. Larger plants should be planted individually.

Use **Waterlife's TropiFlora** liquid plant food to give them the minerals and micro nutrients that they need to grow and flourish.

TropiFlora has been specially formulated for aquaria and does not contain any nitrate (No_3). However it is rich in nutrients such as iron, magnesium, potassium etc., which are essential for plant life.

Encouraging higher plant growth is one of the best ways to keep nitrate levels within the aquarium low and suppress algae growth.

Cobalt Blue Discus - A South American Cichlid that is regarded as one of the most beautiful freshwater species avaiable. This gentle and graceful fish can reach up to 15 cms and prefers soft acid water. Care should be taken over what other fish are kept alongside Discus as they can become distressed with boisterous species.

Snails

Some people may tell you that snails in your tank are a good thing. This is not the case! Snails will eat algae and are scavengers, but they will eat plants and are also disease carriers for many parasites and pathogens. Snails are most commonly introduced into the aquarium with plants.

Their numbers are best controlled by removing them when seen.

Stocking capacity & number of fish?

It is advisable to gradually introduce your fish to the tank over a number of weeks so as not to over-load the filter. It may take several months before you reach maximum stocking density.
To calculate the aquarium volume in litres, multiply the [L x W x D] in cms. and divide by 1000. For Imp. Galls., Multiply the [L x W x D] in inches and divide by 276.
Please note: Allow for water displaced by gravel, rocks etc.
Your maximum stocking ratio can be worked out as follows:
2.5cm (1 inch) of fish (from tip of nose to tail) per 5 litres (approx. 1 gall.) of filtered aquarium water.

Introducing fish to the aquarium

Once you have got your new fish home you need to acclimatise them properly as the shops water is likely to be slightly different to your own. You should take your time to get your new pets used to the temperature initially and then the water itself as follows:

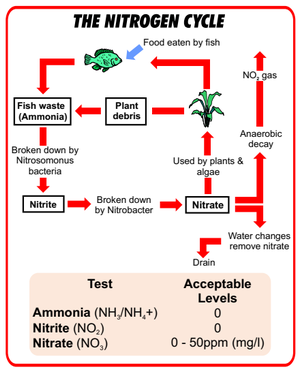
- Turn the aquarium lights off.
- Float the bag on top of the aquarium water for 10 mins.
- Undo the bag, roll the sides down, pour some water out of the bag and add some of your tank water.
- Repeat the above, twice more over a 20 min. period until you are satisfied that the temperatures have balanced and the fish are swimming freely.
- Tilt the bag and allow the fish to swim out in their own time.
- Turn the aquarium lights back on after approximately 2 hours.
- Now add a dose of **Waterlife Myxazin** to reduce the likelihood of disease which may be caused by the stress of transportation.

Do not feed any of the tank's inhabitants for 24 hour.
For certain more aggressive species of fish it may be advisable to re-arrange rock work in the aquarium prior to adding the fish, to break up any existing territories which might have been made.

Fish waste & water testing

Maintaining good water conditions are the key to keeping your fish healthy. Water parameters - temperature, pH, ammonia/ammonium, nitrite, nitrate, GH & KH are perhaps some of the most important things to test. The following paragraph explains the fish waste / nitrogen cycle.

Ammonia is the raw waste product from fish. It is excreted as a soluble gas across the gills and is very toxic at high enough levels. Fortunately naturally occuring bacteria (Nitrosomonus) feed on ammonia and convert it to slightly less toxic nitrite. Another set of bacteria (Nitrobacter) feed on the nitrite to convert it to relatively harmless nitrate, which is partially absorbed by plants as food. This can best be explained by the diagram.



Test	Acceptable Levels
Ammonia (NH_3/NH_4+)	0
Nitrite (NO_2)	0
Nitrate (NO_3)	0 - 50ppm (mg/l)

Keeping these levels under control has never been easier with the aid of **Waterlife's BacterLife**, (an essential blend of beneficial bacteria which *naturally* aids the break down of ammonia and nitrite)

Green water/ cloudy water?

Common water quality problems in aquaria are green /cloudy water or algae formation (green or brown deposits on gravel, ornaments or aquarium glass). Some of the more likely causes and their remedies are listed below:

Problem	Cause	Remedy
"White-ish" cloudy water	Filter is not bacterially mature	Use **Waterlife's BacterLife** (bio-culture) to boost filter bacteria.
Cloudy water	The aquarium is overstocked	Reduce stocking. Add **BacterLife**. Consider larger filter & tank.
Green / Cloudy water	Overfeeding	Perhaps one of the major causes of green water. If you buy a premium brand food and use **Waterlife's Vitazin** (multi-vtamin supplement) it is unnecessary to feed large quantities. Overfeeding can cause pollution and algae growth. A small quantity once or twice a day is normally adequate – dependant on the age of fish.
"Brown-ish" cloudy water	The filter is not large enough and/or is not working efficiently	Regular maintenance of filtration is required. However filters should not be cleaned too thoroughly and should be rinsed out using old aquarium water. When buying an aquarium filter and pump always buy the largest you can afford. **StayClear A** will assist.
Algae growth	Lack of natural plants & high nitrate (NO_3) levels	Algae is a basic form of plant life. Higher plants compete with Algae for the same nutrients in the water. Use **Waterlife's TropiFlora,** to encourage plant growth. A well-planted aquarium will help restrict algae growth as will chemical absorbers such as nitrate absorbing filter resins. Sadly tap water can contain nitrate.
Algae growth	Lighting	Again, plants will help but always bear in mind when placing an aquarium, not to position in an area where it will receive full sunlight. Artificial aquarium lighting may be the wrong spectrum, too old, or left on for too long or too short a period of time. An average of 8 hours light per day is usually sufficient.

Maintenance schedules

Weekly checks

1. It is vital to test for ammonia and nitrite levels weekly using your **Waterlife test kits**. Use **BacterLife** regularly to help keep levels safe.
2. It is equally important to use the **Waterlife Nitrate Test Kit** at least once a week. Use **Waterlife TropiFlora** to encourage plant growth.
3. pH testing will highlight falling pH, correct with **6.5 Buffer, Humaquat, 7.2 Buffer or 8.3 Buffer** depending on the fish you are keeping.
4. Check daily that the temperature is in optimum level for the fishes requirements.

Monthly checks

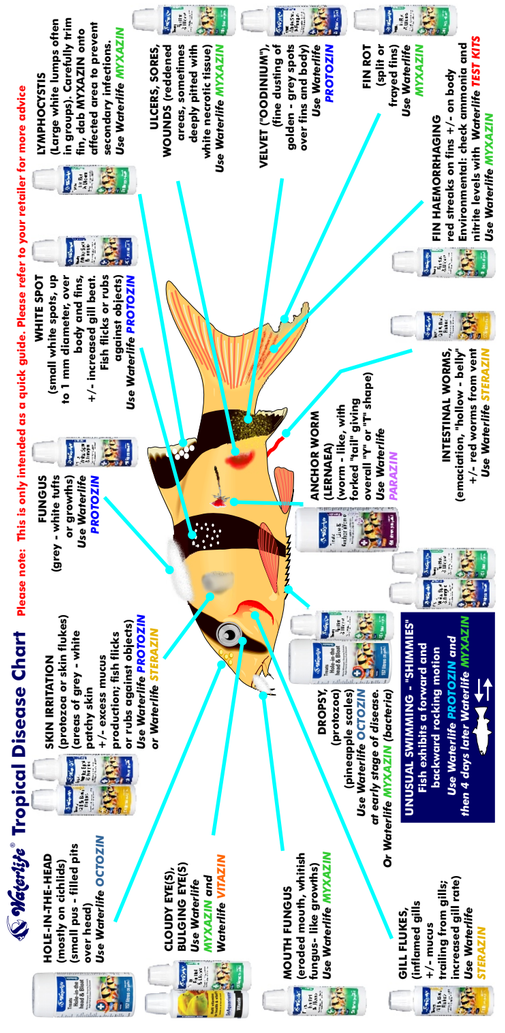
1. Top up evaporation losses with **Haloex** treated tap water. Remember to adjust pH with the appropriate Buffer according to the species of fish kept
2. Partial water change between 10 - 30% of the water in your system. Even in an emergency, try not to change more than 50% as the resulting pH shift will endanger the health of the entire aquarium. Small regular water changes are best.
3. Check filter is working efficiently and flow rate is not impaired. If necessary clean filter sponges (if present) remembering to use aquarium water, not tap water. The chlorine in tap water will destroy the filter bacteria. Use **Waterlife BacterLife** to maintain good bacteria.
4. Remove excess waste from gravel with an aquarium vacuum / gravel cleaner. **NB**. If you are using an undergravel filter do not remove all the waste as this is what the filter bacteria thrive on.

fish disease

Fishes, like other creatures, are prone to 5 main causes of illness, these are:

Symptoms	Condition	Cause	Medication
1. Fins appear eroded / ragged and possibly bloody.	Fin – Rot	Bacteria	**Myxazin**
2. Cotton wool type growths on fins or body	Fungus	Fungi	**Protozin**
3. Tiny white specks covering fins and body. +/- respiration & irritation. Fish may stop feeding	Whitespot	Protozoa parasite	**Protozin**
4. Fish flicking / rubbing. Spots or cloudy patches on body/fins may be seen. Fish continue to feed until late stages. Gulping near surface or lethargy may be witnessed.	Flukes	Metazoa parasite	**Sterazin**
5. A "T" or "Y" shaped object with a forked tail attached to body of fish.	Anchor worm	Crustacean parasite	**Parazin**
6. Flattened, oval parasite attached to body surface.	Fish louse	Crustacean parasite	**Parazin**

As you can see from the table above, most common conditions are easily treated with **Waterlife** products.



Shopping list

Item	Price
Aquarium	
Stand	
Internal or external cannister filter	
Air pump	
Airline / non return valve	
Lights	
Heater	
Gravel	
Rocks / ornaments	
Plants	
TropiFlora - plant food	
Fish food	
Haloex - dechlorinator	
BacterLife - beneficial bacteria	
Waterlife Ammonia Test	
Waterlife Nitrite Test	
Waterlife Nitrate Test	
Waterlife Broad Range pH Test	
GH Test	
Waterlife KH Test	
Humaquat - blackwater tonic	
6.5 Buffer - softens and acidifies water	
7.2 Buffer - softens and acidifies water	
Aquarium Salt	
8.3 Buffer - increase pH and hardness	
StayClear A - clears cloudy water	
AmmoClear - absorbs ammonia	
Carbon Excel - "polishes" aquarium water	
Vitazin - multi-vitamins	
Paragon - tonic	
Protozin - for whitespot and fungus	
Sterazin - for flukes & internal worms	
Myxazin - for fin rot, ulcers, wounds etc.	
Octozin - for internal parasites	
Parazin - for crustacean parasites	
Total	

All the above information in this guide is given to the best of our abilities and knowledge.
However we cannot be held responsible for any losses or damages caused by misinterpretation or misunderstanding or caused by misdiagnosis or misuse of Waterlife products.

For other waterlife guides, go to:
http://www.waterlife.co.uk/charts-guides

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