

## Tropical Freshwater Fish

### How to care for African lake cichlids

Although Malawi cichlids are arguably the most famous fish from Africa, there are many other members of the *Cichlidae* family that originate from Africa, such as those from Lake Tanganyika, that are also excellent aquarium inhabitants (see our other caresheets for other cichlid species). These fish vary in size and temperament, so research species compatibility before adding to your aquarium (your OATA retailer should be able to help with this). Otherwise, they are usually undemanding aquarium inhabitants and are easy to keep.

Thanks to Maidenhead Aquatics for use of this picture



### Water requirements

African lake cichlids are specialised fish and require particular water parameters, as shown below. These parameters are a general guide for this group of fish, so it is important to check with your OATA retailer for any species-specific requirements before purchasing.

Temperature:	between 23-27°C
pH:	8.0-8.6
Ammonia:	Zero mg per litre
Nitrite:	Zero mg per litre
Nitrate:	Not to exceed 20 mg per litre above normal tap water levels
General hardness:	Hard (12-18°dH)
Carbonate hardness:	Hard (10-15°dkH)

### Biology

There are various different lakes in Africa that support cichlid species but the two most famous (other than Lake Malawi) are Lake Tanganyika and Lake Victoria. There are many different species in the aquarium trade but some of the most popular are “julies” (*Julidochromis* species), fairy cichlids (*Neolamprologus pulcher*), trophéus (*Tropheus* species) and frontosa (*Cyphotilapia* species). African lake cichlids range from fairly small species such as shell-dwelling cichlids (*Neolamprologus brevis* and *Neolamprologus multifaciatus*) which grow to 6cm, to much larger species such as frontosa which can grow to over 30cm. These fish can live several years in a well matured set up with good water quality.

Very few, if any, African lake cichlids do well when kept singly and are likely to become stressed. However, the numbers in which you keep African lake cichlids will depend on the species. Some “julies” can be kept in pairs, trophéus will require a group of over 10 individuals and kept slightly overstocked and frontosa will do



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best in groups of over six. Consult your OATA retailer for the best way to stock your African lake cichlids. If keeping in groups, it is usually best to keep more females than males to prevent fighting.

Many of these fish show differences between sexes once adult, but not as juveniles. The main difference is colour or the finnage, with males being more colourful and having longer fins. In frontosa, a sexually mature male may also develop a 'hump' on the forehead. The exact differences between males and females will vary between species.

## Aquarium requirements

As a general rule, you should within reason, buy an aquarium as large as possible. The size will vary depending on the species of African lake cichlid you would like to keep. For example, a pair of the smallest shell dwellers will need an aquarium of at least 45cm in length. Larger species such as frontosa will need an aquarium of about 180cm long and may need even more space as they grow to accommodate territories. The larger the aquarium, the more stable the environmental conditions such as temperature and water quality will be. Whatever the size, a **filter is always essential**. Due to the crowded environments needed for some African lake cichlid communities, it is recommended that an oversized filter is installed. Similarly, vigorous aeration is recommended to ensure that there is enough dissolved oxygen available.

The tank should have a fine coral sand or a similar substrate to buffer the water. African lake cichlids will uproot all but the hardiest of plants so a strong light source is not required. Additionally, some deeper water fish species may appreciate slightly dimmer light. The rest of the aquarium should be decorated with complex rockwork to allow individuals to maintain territories but also to break up any obvious lines of sight to minimise aggression. For the more active species, space in which to swim is important. For the shell-dwelling species, empty snail shells are required for them to live in. Escargot shells are best used, but rinse them thoroughly.

A heater is required to maintain a suitable temperature all year round. To minimise fluctuations in water temperature, the aquarium should not be situated near any draughts or heat sources. It should also be out of direct sunlight and away from loud noises, vibrations and sudden movements. Overhead tank lighting is recommended to maintain a correct day-night cycle.

**Water testing kits are essential** so water quality can be checked on a regular basis (once a week) to ensure it does not slip below the water requirements stated earlier.

## Introducing your fish

Before adding any fish, seek advice from your OATA retailer to make sure that your aquarium is an appropriate size for the number of African lake cichlids you would like to keep. Check that the water quality in your aquarium is suitable i.e. levels of ammonia and nitrite are zero. Only increase the number of fish you have in your aquarium slowly as the



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population of beneficial bacteria established when maturing your aquarium filter need to increase every time more fish are added and feeding increases. Overstocking or stocking your aquarium too quickly can result in 'new tank syndrome'. This occurs when there are not enough nitrifying bacteria to cope with the increased waste from the fish, leading to unhealthy levels of ammonia and nitrite, which may cause fish to become ill or die.

Healthy fish have clear bright eyes, undamaged fins, intact scales, no ulcerations or bumps, appropriate swimming behaviour and steady breathing. Do not purchase a seemingly healthy fish if sickly fish are present in the tank with it. Signs of disease can include clamped fins, flicking against gravel or décor and shimmying (shaking). Diseases can be easily carried by fish that do not show any clinical signs. If in doubt, ask your OATA retailer for advice as they will have in-depth knowledge and experience.

Your OATA retailer will usually sell your fish to you in a plastic bag. Try not to keep them in this for too long. Once purchased, take your new fish home as quickly as possible because fish are easily stressed by bright lights, extreme temperatures, noise and movement.

Once home, your fish will need to acclimatise to their new environment and a common method of doing this is known as the 'floating bag' method. Switch off the aquarium lights and take the bag containing your new fish out of its outer wrappings carefully, avoiding exposure to bright light. Float the bag in the water of your tank to ensure the temperature in the bag is the same as the aquarium water. After 10 minutes, slowly introduce small amounts of aquarium water into the bag containing the fish for up to 20 minutes. Once complete, carefully release the fish into the aquarium whilst introducing as little bag water into the aquarium as possible. After this, dispose of the bag and any excess water appropriately. Monitor your new fish carefully for the first week, paying particular attention to water quality.

## Maintenance

At least once every week, a partial water change of 25% is strongly recommended (a siphon device is useful to remove solid waste from the gravel). The water should be tested regularly (at least once per week) to ensure that ammonia and nitrites don't build up. Ensure that the replacement water is treated with tap water conditioner to remove any harmful chlorine or chloramine present before adding to the aquarium.

Filters should be checked for blockages. If the filter needs cleaning, do not run it under the tap because any chlorine or chloramine present may kill the beneficial bacterial population that has established in the media. Instead, it should be rinsed lightly in the tank water which is removed during a partial water change as this reduces the amount of bacteria which are lost.

Good husbandry is essential as African lake cichlids can be stressed by even the smallest amounts of ammonia and nitrite which may then cause them to develop various diseases. Test the water to monitor the ammonia, nitrite and nitrate levels, together



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with pH and water hardness every week, especially during initial set-up and after adding extra fish.

## What to watch out for

All fish will have slight variations in their behaviour or appearance, but keeping an eye on any changes in the following will help to identify any potential problems before they become a real health issue:

- swimming behaviour – hanging at the surface, sitting on the bottom or erratic swimming
- colour – turning a darker or paler colour than normal
- temperament – changes in level of aggression or hiding more than normal
- breathing – gill covers moving at a slower or faster rate than normal
- appearance – development of white spots or fluffy growths, loss of fins or scales
- condition – increase or decrease in body weight and condition
- feeding – reduced intake or lack of interest in food

If you are concerned about the health of any of your livestock, then test your water quality and contact your OATA retailer for further guidance.

## Feeding

The dietary requirements of African lake cichlids varies. Species such as tropheus are herbivorous and will appreciate both specialised cichlid feeds with a high algae content and fresh vegetables. Some of the larger more predatory species are carnivorous and so will require pellets with a higher animal content and frozen feeds such as brine shrimp, prawns or cockles. Ask your OATA retailer for species-specific advice. African lake cichlids should only be fed what they can eat within a few minutes, twice a day. Take care not to overfeed as this can lead to a build-up of uneaten food which breaks down releasing toxic waste into the water. If in doubt, ask your OATA retailer for advice on appropriate feeding levels.

## Compatibility

As a general rule, African lake species should only be stocked with other species from the same location e.g. a Lake Tanganyikan community. It is not generally recommended to mix Malawi and Tanganyikan cichlids due differences in temperament and behaviours. Some species will require a slight overstocking to ensure that any individuals are not overly aggressive to weaker members of the group. It may be best to add some African lake cichlids in groups to avoid any individual fish receiving unnecessary aggression as they settle in. It is also recommended to add more peaceful species first and the more aggressive species later. Re-arranging the aquarium décor can help to reduce any aggression as fish find new territories. Speak to your OATA retailer for more specific advice around stocking African lake cichlids.



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## Breeding

Many African lake cichlids can be bred in an aquarium. Some species are mouth brooders which is different to many other tropical species, making breeding a rewarding challenge. The female picks up fertilised eggs and holds them in her mouth until small fry are released. Other species may spawn in empty snail shells and are reared by the female until they are large enough to leave. Some species may form complex social groups with juvenile fish taking care of the newest batch of fry. Speak to your OATA retailer for more advice on breeding these fish.

## Checklist

Before purchase make sure:

1. You have the appropriate equipment and position for the aquarium.
2. You have researched all the species in which you are interested and your final choices are all compatible.
3. You are familiar with how to transport and release your fish.
4. You are aware of the daily, weekly and monthly maintenance your aquarium will require.
5. You are prepared to look after your fish properly for the duration of their life.

## Shopping List

- Glass or acrylic aquarium
- Filter\*
- Heater
- Lighting (required for live plants)\*
- Gravel or sand
- Tap water conditioner/dechlorinator
- Water testing kits (ideally ammonia, nitrite, nitrate, pH and water hardness)
- Gravel cleaner/siphon cleaning device (recommended)
- Aquarium decorations and/or live plants
- Bucket for water changes

\*may be included in branded aquarium sets but can be purchased separately.

## Before purchase make sure:

- The aquarium is of a suitable size that ideally can accommodate the fish once they are fully grown
- Water parameters are as advised in this leaflet.
- Aquarium is cycled and ready to receive your fish.



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### Always buy...

test kits and regularly check the water for ammonia, nitrite, nitrate and pH. This will allow you to make sure the water in your aquarium is not causing welfare problems for your African cichlids.

### Maintain...

the water in the aquarium within the accepted parameters highlighted above. You may need to do regular water changes to achieve this.

### Never siphon by mouth...

A fish tank can harbour bacteria which can be harmful if swallowed. Buy a specially designed aquarium gravel cleaner which can be started or primed without the need to place the siphon in your mouth

### Establish a routine...

for testing the water in your aquarium. Record your results to enable you to identify fluctuations quickly. Also check the temperature of the water.

### Always wash your hands...

making sure to rinse off all soap residues, before putting them into your aquarium, or use long sleeved rubber gloves. Wash your hands again afterwards and certainly before eating, drinking or smoking.

## Five Welfare Needs Checklist:

The Animal Welfare Act 2006 states that all pet owners have a legal duty of care to their pets. Anyone who is cruel to an animal or is found not to be providing the five animal welfare needs, as listed below, can be prosecuted.

- ▶ A **suitable environment** e.g. appropriately sized tank (with water heater if tropical set up) within a suitable location in your home.
- ▶ A **suitable diet** which meets the needs of your chosen fish.
- ▶ **Behaviour** - Fish are able to exhibit their normal behaviour e.g. hiding places for timid fish, enough room for fish to swim freely.
- ▶ **Companionship** - Ensure you know whether your chosen fish need to be kept with, or apart from, other fish.
- ▶ **Health** - Protected from pain, injury, suffering & disease e.g. you are aware of the daily, weekly and monthly maintenance that your aquarium will need.

- ▶ **Water quality test kits are a necessity not an optional extra**
- ▶ **You must be prepared to look after your fish properly for the duration of their life and provide an aquarium which can accommodate your fish when fully grown**



\*Never release your aquarium animals or plants into the wild

It is illegal and for most fish species this will lead to an untimely and possibly lingering death. Any animals or plants that do survive might be harmful to our native countryside. Take care to properly dispose of any soiled substrate (e.g. sand or gravel) or decorations so that non-native organisms do not enter natural watercourses.

Visit [ornamentalfish.org](http://ornamentalfish.org) to find a full range of how to guides and species-specific care sheets to help you look after your fish successfully.



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