Tropical Freshwater Fish
How to care for African Malawi cichlids

Malawi cichlids are colourful, diverse and aggressive fish. They are from the family *Cichlidae* and originate from Lake Malawi, one of the most biodiverse lakes in the world. The majority in the aquarium trade are captive bred. These fish vary in size, however, they are all aggressive and should be mixed with caution. Other than this, they are usually undemanding aquarium inhabitants and are easy to keep.

Water requirements

Malawi cichlids are a specialised group of 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 many different species of Malawi cichlid, which are loosely split into two main groups. Mbuna are rock dwelling species, and utaka swim in the open water. Most Malawi cichlids grow to around 10cm, but some will grow up to 25cm. These fish can live several years in a well matured set up with good water quality.

Although Malawi cichlids are not social fish and can be highly aggressive, they can be kept in groups of at least 15 and slightly overcrowded to limit aggression. Malawi cichlids kept in small groups will often fight. Where possible, it is also worth keeping more females than males of each species to prevent males from harassing one individual female.

Many of these fish only show differences between sexes once they become adults, but not as juveniles. The main sex difference is colour or the presence of egg spots on the males' anal fin. The exact differences between males and females will vary with species.

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Aquarium requirements

As a general rule, you should within reason, buy an aquarium as large as possible. It is recommended that an aquarium of at least 200 litres is used for a reasonable sized community of fish, although there may be some more specialist species which can be kept in smaller aquariums. 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 successful Malawi communities, it is recommended that an oversized filter is used. Similarly, aggressive aeration is recommended to ensure that there is enough dissolved oxygen available.

The tank should have coral sand or similar substrate to buffer the water. Malawi cichlids will often dig and rearrange the substrate, which will uproot any plants present. As such, only the hardiest plants that grow attached to surfaces are likely to survive, so a strong light source might not be needed. 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.

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 that water quality can be checked on a regular basis (once a week) to ensure it does not slip below the water requirements stated above.

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 Malawi 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 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).

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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. If in doubt, contact your OATA retailer for advice.

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 Malawi 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 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

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- 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 Malawi cichlids vary. The smaller mbuna species are more herbivorous and will appreciate both specialised Malawi cichlid feeds with a high algae content and fresh vegetables. Some of the larger utaka species may be more predatory and will require pellets with a higher animal content with frozen feeds such as brine shrimp, prawns or cockles. Ask your OATA retailer for species-specific advice.

Malawi 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

Malawi cichlids should only be kept with other Malawi cichlids or some species of *Synodontis* catfish, which also naturally inhabit lake Malawi. As previously stated, a slight overstocking is required to spread aggression evenly throughout the population. It is best to add Malawi cichlids in groups to avoid any individual fish receiving unnecessary aggression as they settle in. It is also recommended to add the 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 on stocking Malawi cichlids.

Breeding

Some Malawi cichlids can be bred in an aquarium. They are mouth brooders which is different to many other tropical species, making breeding a rewarding challenge. Malawi cichlids will successfully breed in a tank with other fish and if there are plenty of hiding places, some of the fry may survive. A male will usually exhibit bright colours and show digging behaviour before spawning occurs. The female will hold the fertilised eggs in her mouth for between 21-40 days. The fry, when released, are larger than most other fry and can feed readily.

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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

- Suitably sized glass or acrylic aquarium
- Secure lid (optional but recommended)
- Filter*
- Heater*
- Lighting (required for live plants) *
- Aquarium gravel, soil, or sand
- Tap water conditioner/dechlorinator
- Freshwater testing kits (ideally ammonia, nitrite, nitrate, pH and water hardness)
- Aquarium decorations and/or live plants
- Aquarium/enclosure cleaning equipment (e.g. siphon, bucket)

*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 fish.

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 Malawi cichlids.

Maintain...

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

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

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hands again afterwards and certainly before eating, drinking or smoking.

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

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) water or decorations so that non-native organisms do not enter natural watercourses.

Visit 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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