Tropical Freshwater Fish
How to care for discus

Discus belong to the *Cichlidae* family and are held in the highest regard amongst fish keepers and by some as the ultimate freshwater tropical species. They originate from South America, but captive bred discus are the most common in the trade. Although they are not as aggressive as some of their close relatives, they do have specialised care requirements.

Water requirements

Discus require more specific water parameters than many other fish. Tank bred discus can tolerate harder water than their wild counterparts. However clean, warm soft, slightly acidic water is optimum for all discus, and the best way to achieve this is through regular partial water changes. Always ensure you ask about what conditions discus are currently being kept in and then attempt to replicate these in your aquarium.

Temperature:	between 26-30°C
pH:	6.0-7.5
Ammonia:	Zero mg per litre
Nitrite:	Zero mg per litre
Nitrate:	Not to exceed 20 mg per litre
General hardness:	Soft-medium (4-12°dH)
Carbonate hardness:	Soft-medium (3-10°dkH)

Biology

Discus are from the genus *Symphysodon.*

Adult Discus can reach up to 20cm across, although they are slow growers. Discus can live for many years in a well matured set up with good water quality.

Discus are shoaling fish and should be kept in groups of at least five in the home aquarium, but more is better. Discus are social fish and those which are kept singly or in too small groups will often become stressed or bullied by larger/more dominant fish. It is sometimes possible to keep two discus in a set up provided they are an already established pair breeding pair.

It is difficult to sex discus unless they are in breeding condition when the female's ovipositor can be seen.

There are many different colour variations which have been selectively bred.

Aquarium requirements

As a general rule, you should within reason, buy an aquarium as large as possible. It is recommended that each adult discus should each have 50 litres of water volume, with plenty of floor space. An aquarium of approximately 300 litres will house a shoal of six adults. 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**.

Ideally, substrate should be either fine gravel or sand to allow discuss to feed naturally by "blowing" the substrate. Discus will also benefit from live plant cover in which to hide as they can be shy. You should also include branches, wood and other ornaments to provide cover. Given their size and shape, it is also important to provide discus with some open space in which to swim as a group when they explore the aquarium. Overhead tank lighting is recommended to maintain a correct day-night cycle, however it should not be too bright, but dim enough to ensure that the discus feel comfortable. Using floating plants or branches will provide areas of shade to make them feel at ease.

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.

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 discus 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. With discus, it is important to ensure individuals are full bodied and feeding well and your retailer should be happy to show you this. 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.

For discus, it is best to use a gentler acclimation process than other fish. It is best to keep the fish in the container in which it is sold, or place the fish and water into another container such as a bucket. A small airline siphon should then be started to drip water from your aquarium, slowly changing the water parameters in the bucket to that of the aquarium. Ensure that the temperature does not fall too low during this procedure. Once conditions match, net the fish from the container into the aquarium. 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 50% is strongly recommended (a siphon device is useful to remove solid waste from the gravel). If using sand as substrate, be sure to stir the open areas regularly to prevent "dead spots" of waste build up. 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 discus 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
- 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

Discus are generally carnivores and eat aquatic invertebrates in the wild. There are many specialised dried discus feeds which are available in granules or pellets and these should be used at least once a day to ensure adequate vitamins are provided. Discus will also appreciate frozen or live feeds, in particular, beef heart, bloodworm and special 'discus mixes'.

Discus should only be fed what they can eat within a few minutes. However, they have a relatively small stomach and so will appreciate 2-3 smaller feeds throughout the 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

Discus should be kept in an aquarium suited to their needs and therefore, only a handful of other species will be suitable tankmates. These include medium sized tetras, Corydoras, plecos and dwarf cichlids. Incorporating these fish into a discus tank may help them feel more confident as they use smaller "dither" fish to ensure there are no predators near.

Breeding

A group of juvenile discus bought together (and with a bit of luck) will form pairings. Alternatively, some shops may also sell a proven breeding pair, however they are often more expensive.

A pair which is ready to breed will need to be placed into a breeding tank for best success. This should be large enough for two adults and contain an unobstructed vertical surface onto which they can lay their eggs. Carry out regular partial water changes with good quality live or frozen feeds to induce spawning.

Eggs are deposited onto a vertical surface. These will hatch after three days, and the free-swimming fry will feed from mucus supplied through the skin of their parents. Fry should be able to accept specific fry food from around five days onwards.

Eventually, fry will need to be separated from the parents' tank to a separate tank to avoid parents becoming territorial with their offspring.

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 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 discus.

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.

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

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) 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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