

care sheet **discus** (*Symphysodon* sp.)

Discus is considered by most hobbyists as being the ultimate fresh water aquarium fish. Few other species can rival their majestic behaviour, fabulous colour, and incredible intelligence. Coupled with this is their most interesting method of reproduction. The parents pair up, lay eggs, and care for and protect the newly hatched fry. The young actually derive their nutrition by feeding from a special protein rich secretion produced by special glands in the skin of their parents.

Discus Species

There are two species of discus, and these have been divided into the following sub-species.

<i>Symphysodon aequifasciata axelrodi</i>	(brown discus)
<i>Symphysodon aequifasciata aequifasciata</i>	(green discus)
<i>Symphysodon aequifasciata haraldi</i>	(wild blue discus)
<i>Symphysodon discus discus</i>	(heckel discus)
<i>Symphysodon discus willischwartzii</i>	(pineapple discus)

Discus Varieties

Selecting, line breeding and hybridising colour sports of the wild fish today have derived the fantastic colour forms of discus on the market. A great deal of confusion exists over popular names of the different discus colour forms. What seems to happen is, commercial breeders give any new colour form their own "popular" name. This leads to very little consistency in the industry.

The following descriptions would seem to represent what the majority of hobbyists accept.

Brown

A brownish coloured fish, showing a few wavy, blue, iridescent lines over the head, and the dorsal and anal fin.

Turquoise

Wide, wavy, iridescent blue/green lines over the body and fins. Good quality turquoise have the coloured lines extending all over the body from the snout to the caudal peduncle.

Brilliant Turquoise

As above, only the colour lines are a shiny iridescent blue/green.

Red Turquoise

As for turquoise, only the colour lines are a little wider and the background colour is reddish.

Cobalt Blue

As for turquoise, only the colour lines are a distinct cobalt blue colour.

Pearl

These have the wavy, iridescent blue/green lines broken into short segments. These "dots" are arranged in whirl patterns over the body.

Solid colour

Where the term solid is used in front of the colour variety, it means the iridescent lines have merged together, giving the fish a solid green or blue colour.

Red Dragon

These fish have broad, irregular and often fragmented wavy lines over the body. The colour of these lines is usually very light, a silvery turquoise.

Young discus under 5cm show little colour, so a good deal of trust must be involved when buying youngsters. Adult discus can attain a size of approximately 20cm. There are also colour fed discus' offered on the international market. Fortunately with



Australia's 14 days quarantine regulations, any imported colour fed discus should be back to natural colour by the time they reached the shops, thus providing a safeguard for buyers.

Natural Habitat

The natural habitat of discus is the Amazon Basin, where they live amongst the protection of submerged tree roots, logs, and heavy aquatic vegetation. The water is soft, under 30ppm and acid, with a pH between 5 and 6. It also has a low bacteria count, and is high in humic acid and tannic substances. Discus spawn in natural ponds, created during the annual rainy season floods. Here the water reaches temperatures of 32° Celsius and natural food abounds.

Key Factors to Success

Water quality is the key factor in successful discus keeping. High levels of bacteria, which develop in the presence of decomposing matter, are not tolerated. This means under no circumstances should food or other organics be left to decompose in the tank. Dissolved wastes must not be allowed to build up; therefore there is a need for efficient mechanical and biological filtration and regular partial water changes. Discus tanks should have at least a 1/3 water change every week or better still 10% every day. Discus breeding establishments in Asia carry out substantial partial water changes daily.

Water

Discus should be kept at a pH of about 6.5 and in relatively soft water of about 50 - 100ppm general hardness. Experience has shown that dramatic falls in pH, as can occur in very soft water, are detrimental to discus. Adjusting carbonate hardness is an ideal way of controlling pH without increasing general hardness. However, to breed them successfully, one needs to drop pH to about 6.0 and general hardness to under 50ppm.

Newly Arrived Fish

Newly arrived discus are best put away in acid water, as low as pH 6.0. After acclimatisation pH can be gradually lifted.

Peat Moss

Water quality can be greatly improved by filtering through good quality peat moss or adding peat extracts. The humic acids and tannins, which stain the water a light brown, keep the bacteria down in numbers. Discus do not like new tap water and peat moss or peat extracts conditions water to their liking.

Temperature

Water temperature is important to the well being of discus. They should be kept at about 28 degrees Celsius and 30 degrees Celsius is preferred.



Compatibility

Generally speaking, discus should not be mixed with other fish as they cannot compete for food. Discus are hearty eaters but they eat in a slow and careful manner. A few *Corydoras* catfish are useful to clean up left over food. Other acceptable tank mates are cardinals, neons, rummy nose and South American dwarf cichlids, like the genus *Apistogramma*.

Tank Position

Discus are best kept in top tanks in shops as this position is usually warmer and the discus are less disturbed by passing traffic.

Feeding

Discus are best fed 3 or 4 times a day, in fact commercial breeders feed their young discus 6 to 8 times a day. Any of the commercially prepared frozen foods are acceptable and in particular, frozen beef heart and brine shrimp are good. They also eat flake food and freeze dry bloodworms. The favourite food of the discus is live food and of course it is much easier to avoid pollution using this. Live mosquito larvae, daphnia, white worms, bloodworms and chopped earthworms, all make excellent additives to the diet. Tubifex (black worms) are relished by discus but some experts link these to disease, yet some breeders use almost nothing else as food. If worms are clean and have been cultured in waters free from fish, and water birds, they would be safe to use.

Discus are becoming very popular in the hobby today. The knowledge is there to enable them to be kept, grown and bred. Most importantly, quality stock is becoming more readily available all the time.

Disease

Discus problems are thoroughly covered in the T.F.H. book "Discus Health" by Dieter Untergasser (TS169). This book is a must for the serious discus fancier.

High Tech Discus Keeping

The following is a list of systems used by the most progressive discus breeders throughout the world.

1. Dissolved oxygen should be at, or near, saturation. Adequate water circulation and keeping the water surface free of scum are important factors. The use of "surface skimming" as used in trickle filter systems is recommended.
2. Strong "mechanical" filtration in the form of power canister filters to trap and remove suspended solids.
3. Maximum biological filtration and gas exchange can be achieved using trickle filtration (wet-dry filters).
4. Foam fractionization (protein skimming) using the venturi system is an extremely effective form of filtration and can be made to work in fresh water.
5. In re-circulating systems, ultra violet or ozone sterilisation of water stops the spread of disease and dramatically improves water quality.
6. Occasional activated carbon filtration is extremely effective at further clearing water of toxins and discolouration.
7. Pumping water through a well-lit tank of fast growing aquatic plants, such as Fontanilis, (*Vesicularia*) helps remove phosphates, nitrates etc.
8. A de-nitrater can be used to allow anaerobic bacteria to convert nitrate to nitrogen gas, which then can be blown off.
9. New water added to the system can be first micro-filtered and then treated by reverse osmosis filtration to partially demineralise and soften it.

