

Tropical Freshwater Fish

How to care for bettas (Siamese Fighting Fish)

Bettas (Siamese Fighting Fish) are fast becoming some of the most popular fish in the aquarium hobby due to their varied personalities and colouration. They are from the family *Osphronemidae* and originate from Asia, although most specimens available in the trade are captive bred to produce intense colouration.



Water requirements

Tank-reared individuals are usually undemanding of water chemistry and their suggested parameters are shown below.

Temperature:	between 20-28°C
pH:	6.0-8.0
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:	Soft-medium (4-12°dH)
Carbonate hardness:	Soft-medium (3-10°dkH)

There are some less common species of betta that will require specific conditions. Speak to your OATA retailer for advice before purchasing any of these species.

Biology

Bettas are anabantids, fish which have developed a specialised labyrinth organ which allows them to breathe atmospheric air. However, this does not mean they require any less care than other species of fish and will still require an appropriate aquarium with adequate filtration.

There are many different species of betta out there, however the most common one in the trade is *Betta splendens*. This species has been the subject of selective breeding to produce a wide range of colours and fin types. Bettas grow to about 7cm and can live for many years in a well matured set up with good water quality. It is easy to sex most bettas, with males being much brighter and having significantly longer finnage. Males are highly aggressive and two should not be mixed or they will fight until one is severely injured, or more likely, killed. Females are much calmer and can be kept in groups of at least 4, but more is better.



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Aquarium requirements

As a general rule you should, within reason, buy an aquarium as large as possible. Ideally, it should be able to accommodate at least a single male betta, or a small group of females. Bettas may often be kept in smaller housing with minimal decoration in when purchased in shops. You should not attempt to replicate these conditions when keeping them in home aquaria. Shop tanks are temporary housing, with high filtration capacity, where additional decoration may compromise welfare due to netting / waste build up. As with any fish, always ensure that your tank is suitable for a Betta for the duration of its lifetime before purchase. It is recommended that an aquarium of at least 20 litres for a single male and at least a 60 litre aquarium for a group of females. 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**.

The tank should also have aquarium gravel or sand and ideally live plants present to provide cover. If live plants are not used, then the addition of plastic plants and suitable ornaments is recommended, such as plant pots or model caves, which supplies the fish with shelter. To avoid injuries to their long fins, ornaments or artificial plants with sharp or very rough edges should not be selected. It is also important to provide a gentle current for bettas so they can swim freely. It is recommended to leave at least a small gap between the water surface and any cover glasses (glass panels used to prevent evaporation in some aquariums), to allow these species to access air if they wish.

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. Over tank lighting is recommended to maintain 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 bettas 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.



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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. 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 bettas 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.



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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

Bettas are omnivorous and will take most food types. In the home aquarium, they should be fed with a good quality flake or pellet. Specialised betta pellets are available and are designed specifically for these fish. They will also benefit from being fed small items of live or frozen food such as daphnia, small bloodworm or tubifex.

Bettas should only be fed what they can eat within a few minutes once 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

Mixing bettas with other fish can be difficult. As previously stated, two males should never be kept together. Although males are not aggressive towards other species of fish, they are often the subject of intense fin nipping, which can cause stress, disease and death. Therefore, it is recommended to keep males either alone or with very placid tank mates. It is easier to mix females into community aquariums, but they must be kept in a group and without boisterous or aggressive fish present.

Males can be kept in a group with at least five females but they will require a densely planted aquarium to break up line of sight and provide areas to hide in. It should not be attempted by inexperienced keepers.

Breeding

Bettas can be bred in the home aquarium. When females are ready to spawn, they will show vertical bars. Bettas spawn in quite a unique way by making a bubble



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nest, a delicate structure produced from the mouth of the female or male which sometimes contains plant debris to hold it together. The eggs will be placed into this but due to its delicate nature, water flow from filters should be reduced. The male and female will “dance” during courtship, and once this has successfully occurred the eggs will be deposited into the nest. It is best to remove the female as the male will fiercely defend this area. The eggs will usually hatch within 1 day and within 2-3 days you may see the young swimming. For best results, a dedicated set-up and specialist fry foods are required.

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.



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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 betta.

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**



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*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 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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