

## Indoor Coldwater Fish

### How to care for fancy goldfish

Fancy goldfish like Orandas, Black Moors and Ryukins are all the same species of fish as the common goldfish, *Carassius auratus*. These varieties are the result of selective breeding for finnage, body shape and colour. Fancy goldfish are more delicate than common goldfish and require greater care to keep them successfully. To achieve this, they are best kept in indoor aquaria only. As with all fish, maintaining good water quality is essential for their health, but also make sure that their habitat, diet and companions are compatible with their needs.



### Water requirements

Fancy goldfish are not tolerant of poor water conditions. It is recommended that the water parameters stay within the following guidelines although they can acclimatise to a wider range of temperature, pH and hardness over a period of time:

Temperature:	between 4-25°C, 15-23°C is optimal
pH:	6.5-8.5
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:	Medium-hard (8-18°dH)
Carbonate hardness:	Medium-hard (5-15°dkH)

### Biology

Despite their different appearance, fancy goldfish are still the same species as common goldfish, *Carassius auratus*.

Fancy goldfish do not grow as large as common goldfish and are unlikely to grow larger than 20cm. Fancy goldfish can live for many years in an aquarium with good water quality. There are many reports of fish living 6-8 years and some rare reports of up to 20 years or more.

Fancy goldfish can be sexed during the breeding season in the spring and summer. Males develop tubercles (white spots) on their gill covers and pectoral (front) fins. Females have deeper bodies compared to males.



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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 your goldfish once they are fully grown (they can grow up to sizes of 20 cm). An adult Goldfish should be kept in at least a 100 litre aquarium, allowing for an extra 50 litres per additional adult fish, otherwise, you must be prepared to buy and upgrade their aquarium as they grow. 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 fancy breeds prefer a gentle current, so make sure that the filter's output is not too powerful or is evenly distributed throughout the aquaria by use of a spray bar if possible.

The tank should also have aquarium gravel or sand, and ideally live plants present. Fancy goldfish can readily eat live plants so do ask your OATA retailer for advice on which plants are suitable for goldfish. 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 long fins or delicate eyes, ornaments or artificial plants with sharp or very rough edges should not be selected.

A heater is not required for fancy goldfish unless they are kept in a very cold room. Although fancy goldfish are coldwater fish, they do not tolerate extreme fluctuations in water temperature which can cause stress and lead to disease. Thus, their 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 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 fancy goldfish 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



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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 goldfish 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:



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- 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

Fancy goldfish will take most food types. In the home aquarium, they should be fed with a good quality flake, granule or pellet. Some fancy goldfish can take in air when eating from the surface, causing them to temporarily lose buoyancy shortly after feeding. Try a different food, or a slow-sinking type, to avoid this issue.

It is recommended to supplement regular feeds with a selection of live or frozen foods and vegetable matter. These can include daphnia, bloodworm, brine shrimp, aquatic plants, blanched lettuce or thawed and shelled frozen peas.

They are insatiable feeders and will constantly look for food. Goldfish should only be fed what they can eat within a few minutes, once a day. Try not to over-feed them 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

Fancy goldfish can be kept by themselves or with others. It is not advised that common goldfish are kept with fancy goldfish because common goldfish swim faster than the fancy varieties and they often out-compete them for food. In some cases, there are reports of boisterous common goldfish nipping the fins of fancy varieties.

## Breeding

Fancy goldfish can be successfully bred in large home aquariums. It is more likely to occur if males and females are kept in a ratio of 2:1 (males: females). Spawning can be induced by slowly raising the temperature (in effect, mimicking what happens in spring) to approximately 20°C. It often occurs following a partial water change. The partial water change cools the water and it is the relatively rapid temperature recovery/increase following the water change which seems to trigger spawning.



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Males will chase the females in a courtship display. The fish will lay eggs in plants or a spawning mop which should be removed to another tank afterwards as fancy goldfish are notorious for eating their eggs and fry. If successful breeding has taken place, then the eggs will hatch within approximately three days and dark-coloured fry should be seen swimming within a few days. 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.

### 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

### 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.



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aquarium is not causing welfare problems for your fancy goldfish.

#### 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) 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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