

*If in doubt contact your
local OATA
retail member
for further information*

IMPORTANT THINGS TO REMEMBER:

ALWAYS PURCHASE test kits and regularly check the water for ammonia, nitrite, nitrate and pH. This will allow you to ensure that the water in your aquarium is not causing welfare problems for your fish.

ESTABLISH A ROUTINE for testing the water in your aquarium. Record your results to enable you to highlight fluctuations quickly. Also check the temperature of the water.

MAINTAIN the water in the aquarium within the accepted parameters highlighted in this leaflet. You may need to undertake regular water changes to achieve this.

ALWAYS wash your hands, making sure to rinse off all soap residues, before putting them into your aquarium. Wash them 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. Purchase a specially designed aquarium gravel cleaner which can be started without the need to place the siphon in your mouth.

DO NOT RELEASE YOUR AQUARIUM ANIMALS OR PLANTS INTO THE WILD.

Never release an animal or plant bought for a home aquarium into the wild. This can lead to a untimely and lingering death as these animals are not native to the our environment.

In some instances invasive species can cause damage to our natural ecosystems.

Checklist...

Equipment:

- Aquarium
- Gravel cleaner
- Water testing kit
- Marine salt
- Reverse osmosis, deionised water or tap water conditioner
- Heater, thermometer and hydrometer
- Filter and protein skimmer

Before purchase ensure that:

- The aquarium is well established and large enough.
- Water parameters are as advised.
- You are aware of the dangers of keeping these fish to yourself and others who may come into contact with them.



ORNAMENTAL AQUATIC TRADE ASSOCIATION LTD

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**How to
care for...**



**Venomous and
Poisonous Marine
Species**

Introduction...

There are various poisonous and venomous fish available to be kept in home aquariums. These include lionfish, scorpionfish, boxfish, frogfish, rabbitfish and pufferfish.

A venomous animal is one that possesses apparatus that can inject a toxin whilst a poisonous species is one which can cause harm if ingested. Seek advice about how to handle these fish from your retailer.

Water requirements...

These fish do not tolerate pollutants in the system, therefore they should be added to a well-filtered aquarium. The water parameters are recommended to be within the following, although they may acclimatise to different water in time:

Temperature: 23-26°C

Ammonia: 0mg/l (0.01mg/l may be tolerated for short periods)

Nitrite: 0mg/l (0.125mg/l may be tolerated for short periods)

pH: 8.0-8.4

S.G: 1.020-1.025 at 22-28°C

Biology...

This grouping of fish is diverse and their biology is variable. The size of these fish varies from species to species, however the average aquarium size are as follows: lionfish: 17-38cm, pufferfish: 15-50cm, boxfish: 30-45cm, rabbitfish: 20-25cm, frogfish: 7.5-30cm.

Venomous groups include lionfish, scorpionfish, frogfish rabbitfish. These fish have rigid fin rays capable of injecting venom. Extreme care should be taken when maintaining the aquarium and moving aquarium décor to prevent potential injury. Medical advice must be sought in the event of injury.

Pufferfish and the closely related boxfish are not venomous but are poisonous. Their flesh contains tetrodotoxin which can be deadly to humans if ingested. This, of course is unlikely to happen in the home aquarium! However, some species can release toxins into the surrounding water is stressed

The leading dorsal fin ray of the frogfish has evolved into a "rod" and "lure" or *illicium* and *esca*. Frogfish are ambush predators which use this adaptation to bring potential prey items within striking range.

Aquarium requirements...

Some of these fish have the potential to become quite large. Therefore, a large tank of approximately 200 litres should be viewed as a minimum. Some fish, notably the yellow boxfish (*Ostracion cubicus*), are often sold at a very small size but can grow to over 30 cms quite quickly. Always check the adult size of fish when purchasing your tank.

A filter, heater, thermometer, hydrometer are essential. A protein skimmer may be beneficial, especially when housing species that can excrete toxins.

Many of the ambush predators will appreciate a sandy substrate as they spend most of their time on the bottom of the aquarium. The addition of live rock will aid filtration and also crevices for these fish to retreat into.

This group of fish does not require any specialised lighting. Any lighting chosen is primarily for aesthetic value and some are available that will emphasise the colours of these fish.

Maintenance...

At least every two weeks, a partial water change of 25-30% is strongly recommended (a siphon device is also useful to remove waste from the gravel). This help to reduce the build-up of potentially harmful nitrates and other pollutants. Replacement water should be dechlorinated using strong aeration or a tap water conditioner (if not using reverse osmosis water). Ideally, replacement water should be heated and enough salt should be added to achieve the correct salinity.

Filters should be checked for clogging and blockages. If the filter needs cleaning, then do not wash it using tap water; any chlorine present may kill the beneficial bacteria that has established within the media. Instead, it can be rinsed in tank water which is removed during a partial water change. This should reduce the number of bacteria lost.

Good husbandry is essential as these fish can be stressed by even the smallest amounts of ammonia and nitrite. Test the water weekly to monitor ammonia, nitrite and nitrate, especially after initial set-up and after adding new fish. Don't forget to check the salinity as this may increase due to evaporation of water.

If live rock and invertebrates are present in the aquarium, never use copper based medications. Copper is highly toxic to invertebrate species, including those found within live rock.

Feeding...

Pufferfish, lionfish and frogfish are carnivores, feeding upon smaller fish and invertebrates in the wild. The rabbitfish are primarily herbivores although will feed occasionally on meaty diets. Boxfish are omnivores.

In the home aquarium, the diet required depends upon the type of fish you have. The rabbitfish require algae based foods but will also accept foods like brine shrimp. Lionfish and frogfish prefer larger live foods such as shrimp, but can be weaned onto foods such as thawed frozen lancefish. Boxfish and puffers will accept most aquarium foods, a supply of frozen and good quality pellets are usually accepted. Feed your fish 2-3 times a day and remove any uneaten food to reduce waste build up.

Common ailments...

A water quality problem will affect fish behaviour and can be shown by clamped fins, reduced feeding, erratic swimming and gasping at the surface. Immediately test the water if any of these symptoms are shown. Poor water quality is the main cause of disease outbreak in aquarium fish.

If in doubt ask your retailer for advice.

Compatibility...

The frogfish can predate upon fish up to twice its size due to the extendable stomach and mouth. Therefore they are not good additions to a community aquarium.

Pufferfish have strong teeth making light work of coral and small invertebrates. Therefore, they are not suitable for reef setups. Rabbitfish are relatively peaceful and can be added to a community aquarium; however, they will not tolerate other rabbitfish. Boxfish may release toxins which can kill all other tank mates, therefore only keep in a aquarium if you are sure you can avoid stressing this species. It is important to remember that they will get very large in a short space of time. Lionfish can be housed in community aquariums, as long as the tank mates are not small as they are able to eat smaller fish and invertebrates.

Breeding...

There are no reports of these fish being successfully bred in a home aquarium.