Goldfish originated from the smaller Asian carp (Carassius Auratus) and were one of the first fish to be domesticated over a thousand years ago in China.

Originally bred as a food fish, with a natural colour of silvery grey, it was only when gold mutations started to appear that people started to purposely breed the yellowish gold varieties. However, during the Song Dynasty it was forbidden for any one outside the imperial family to keep gold coloured fish (as it was an imperial colour), so breeders concentrated on producing the red form, possibly why there are redder than the gold coloured fish today.

The Ming Dynasty was the beginning of goldfish being bred indoors and the development of the fancy varieties. Goldfish were then introduced to Japan in 1603 and then Portugal where their popularity spread through out Europe as they represented symbols of good fortune and prosperity. In 1850 the lucky fish were introduced to North America and soon became very popular, leading to the development of the comet goldfish.

Gold fish are fairly tolerant to a range of pH values and temperatures providing there with no drastic changes. However, they are messy eaters and do produce a lot of waste that has to be dealt with in order to prevent toxic ammonia. There was a time when very often trout pellets were fed to Goldfish, these are too high in protein and specialist foods have a higher carbohydrate content. Goldfish are opportunist feeders and will take a large range of foods when in the fry stage they tend to be more carnivorous and as they mature more herbivorous, but of course they will snap up any thing on offer.

The keeping of goldfish in small unfiltered bowls is totally unacceptable, even if the fish can survive it will be stunted in growth and development and the build up of toxic waste will at the very least make resistance to disease much lower.

Partial water changes should be done with care, removing the chlorine either chemically or by allowing the water to stand, preferably with aeration, the fish need a wide surface area to allow for oxygen and a rule of thumb is about 15 imp gallons per fish for larger varieties such as shubunkins, comets etc and about 8 imp gallons per fish for the smaller fancy varieties.
Ammonia can build up very quickly from the waste produced, the longer fish have subjected to high ammonia the damage to their gills and other vital organs increases, and if not corrected such high amount of ammonia will lead to a painful death. Most diseases can be prevented with good fish husbandry, correct feeding and good water quality. But remember, goldfish are covered with a protective slime, so when they are being netted special care needs to be taken so as not to damage or remove the slime as this can lead to bacterial infections. Prevention is always better than cure!

Common diseases:

Listed are some of the more common diseases that can effect goldfish. In every case poor water and the presence of ammonia is the contributing factor that causes these problems, hence why the early action or better still prevention will ensure healthy, happy fish! The seneye device will detect and alert to any life threatening changes.

- Ulcers. Open pinky white wounds caused by damage to natural slime, excessive high Ph or ammonia and nitrite levels. Proceed by changing the water, adding aquarium salt and appropriate anti bacterial medication.

- Cloudy eyes. An eye which takes on a cloudy, opaque appearance is usually the result of a poor diet and poor water conditions, vitamins and a proper diet with correction of water chemistry usually clear this condition.
- Dropsy. A bloated body with scales standing up is caused by build up of ammonia and bacteria. This is difficult to treat but improving water conditions and using an anti bacterial treatment will help.
- White spot. Small spots resembling grains of salt, covering the body, fins and fills is normally caused by stress by dramatic fluctuations in temperature, poor water quality etc. Treat by correcting water parameters, treat with anti parasitic medication (raising temperature can speed up the process).
- Bacterial infection. Reddening of skin and fins, open sores are caused by bad handling, loss of body slime, high ammonia and generally bad water conditions. Correct the water add anti bacterial treatment and salt.
- Fungus. Fluffy growths on wounds, usually following on from parasitic and ulcerated wounds. Treat with salt and anti fungal treatment, in good water quality.
- Finrot. A bacterial infection causing frayed fins with pale reddish red on edge of fins and blood in the fin tissues. Can be caused by fighting, more often from poor water quality, treat with anti bacterial medication, salt and check water quality.
- Swimbladder disorder. Very often genetic but can be caused by poor water quality and too much dried foods, if not genetic then moisten feeds, reduce feed, check water and possibly try an anti bacterial treatment.

Reproduction

There is very little difference in telling the gender of goldfish. Some times, depending on the variety, body shape and size can be good indicators. However, in the breeding season, usually with a temperature increase and longer light cycle, the males will develop white tubercle spots around the gills and their fins and head become more stream lined, where as the females will be noticeably filling with eggs.

The onset of spawning is usually started by males chasing the females, nudging and encouraging the female to start laying her eggs. Goldfish eggs are adhesive and usually laid amongst the strands of oxygenating plants such as elodea, or nylon spawning mats are some times provided. To maximise fertility more than one male is used with each female, depending on the variety, many thousands of eggs are laid, each batch then fertilised by the males. In a few varieties, because of their shape, commercial breeders may hand strip the eggs and then mix with the milt, but great care needs to be taken so as not to damage the fish.

The goldfish should be fully developed, cramped conditions will stunt growth and development. most breeders will use fish between 3-4 years old and some times younger, depending on the variety, however, all this very much depends on how good water and dietary requirements are. Serious breeders will want to select their best fish to reproduce and with the hooded varieties such as orandas, lion heads, ranchus etc, it can take time to develop the hoods as the shape and size of hood is a charateristic that is desired in these fish.

Eggs and Fry

The eggs will hatch between 48-72 hours depending on temperature. For two days the fry will absorb their yolk sac, after all the nutrients have been absorbed the fry will become free swimming and will start searching for food organisms. If raised in aquaria very often brine shrimp is offered with other food alternatives. After a week or so the fry will begin to adopt the goldfish shape and will grow rapidly in the early days. As the fish get larger so will their need for a larger volume of water.

Behaviour

Goldfish kept under correct conditions have long lives and are intelligent fish. They soon recognise who feeds them and will show great excitement when you approach their tank or pond. They make wonderful and interesting pets and it is our duty and responsibility, as with any livestock, to provide proper care and attention.

There are somewhere in the region of three hundred recognised varieties , some like orandas with hoods or wen, some with no dorsal fins such as ranchus or lion heads, fish such as the ryukin with humped body, bubble eyes, telescope eyes, some will find some of the mutations grotesque, some will find interesting, such a huge selection there will be a fish that suits every one. Fantails have been popular for many years as have the orandas, the red cap oranda a particular favourite with many .