

EVERGREENS

Goldfish & Co. – the first ornamental fishes

by Peter Hoffmann

Without doubt the goldfish was the first “real” ornamental fish ever kept by Man. In fact there is some debate as to during which dynasty of the Chinese imperium it first appeared, but, be that as it may, it was more than a thousand years ago. By contrast the goldfish was rather late arriving in Europe. It was apparently imported to both England and Portugal at about the same time (1691), and from there it continued its victorious march all around the world.

But what species of fish was it that the Chinese, and subsequently the Japanese as well, transformed into creatures clad in splendid “cloth of gold”, veiltails with elegant flowing finnage, or skyward-staring monsters? For a long time it was thought that the crucian carp, *Carassius carassius*, was the original ancestral stock. But the natural range of this close relative of the carp is limited to central and eastern Europe! Here it inhabits clear

is found in central Europe, where it is restricted mainly to rivers and large lakes, where it grows faster than its cousin the Crucian carp although its ultimate size (maximum 40 cm, normally 20–25 cm) remains smaller on average. At first glance it seems almost impossible that veiltails and celestials, lionheads and all the other fancy varieties of goldfish, could trace their ancestry back to this species. But we



Everyone is familiar with this colourful aquarium eye-catcher! But in order to keep the aquarium looking good a few rules must be obeyed when keeping these fishes. photo: A.C.S. archives

pools with abundant vegetation, and now and then slow-flowing streams as well. Because of its hardness it was also introduced to clay and gravel pits, where it survived, but became stunted (10–15 cm) and didn’t taste as good. That apart, many anglers regard the “poor man’s carp” as worthless except as bait! But, given better living conditions, these fishes can make a good 30 cm (maximum 50 cm) and develop a very attractive coloration: almost the entire body is golden brown. Only on the belly does this give way to white or a light yellow reminiscent of the gleaming colour of the goldfish.

Nowadays, however, scientists are sure that the crucian carp had no part in the genesis of the goldfish: it was not imported to Asia or crossed later on. The original ancestor of the goldfish is another, closely related, species *Carassius auratus auratus*, which has given rise to a subspecies, *C. auratus gibelio*, sometimes known as the Prussian carp or gibel. This subspecies

must not forget that from time when Man first started keeping and breeding these fishes, the captive stocks became effectively a separate population, isolated from the original wild form and no longer possessing its genetic “bandwidth”. In addition – as with our dogs, horses, and other domestic pets – selection by the breeder was involved, encouraging the desired characteristics and rejecting the undesirable, such that long before our time the people of Asia could gaze in wonder at numerous different sports and deliberately cultivated varieties.

Keeping Goldfish – from the privilege of the nobility to the “entertainment of the masses”! Originally keeping goldfish was the privilege of the nobility. Hosts of the most beautiful specimens were installed in the imperial palaces. Only gradually did these fishes find their way down to the so-called lower classes, but this led not only to their



Goldfish showing wild coloration. photo: A.C.S. archives

becoming more widespread but also to an increase in the number of new cultivated forms. For even for the poor – the peasants and other ordinary workers – ownership of a more or less unusual specimen brought considerable kudos; not just because of its monetary value if sold, but also in the eyes of neighbours and relatives.

Because these fishes were kept mainly in clay pots, wooden bowls, or porcelain vases, the main consideration when breeding was to produce something that could be appreciated from above. And that is the reason behind all those enlarged and multiple tails, the goggle-eyes, and all the other artificial characteristics that we Europeans sometimes regard as monstrous. But to the Asians who developed such breeding lines, the main consideration was simply whether the fish looked interesting and attractive – from above; whether or not they could also swim (properly) was of secondary importance.

Of course European fish enthusiasts and breeders – such as Paul MATTE – took over the veiltail and created their own variants, which, although they trace their ancestry to Chinese forebears, nevertheless bear a quite distinct “signature”. In Europe too a new breeding goal was established – gradually to create a harmonious whole with elegantly trailing finnage which, however, would not hamper the fish when swimming! A goal that one cannot but applaud, and which should continue to be applied today – to ALL species of fish!!!

“Know how” – the proper aquarium

Nowadays Goldfish and Co. are commonly the first aquarium fishes kept by children – and often the last! Would it turn out differently if the choice were instead other easier-to-keep species such as tetras or barbs? Perhaps. Common goldfish and veiltails are really totally unsuitable for the typical 60 cm (24”) beginner’s aquarium – and, of course, for a goldfish bowl. Fortunately these glass torture chambers are rarely offered for sale today!

Unfortunately, however, these fishes will rapidly convert a normal planted tank into their own idea of paradise, not yours! The plants will be nibbled and uprooted, the gravel sifted, and sediment and mulm stirred up. Then there are the greedy appetites and fast-working digestive systems of these fishes! The resulting large quantities of rather slimy faeces will pollute the water even further, until it rapidly becomes a murky soup. And the initial enjoyment is then quickly gone. But things should never be allowed to reach that stage. In a properly set-up aquarium these fishes can be a sight for sore eyes. The most important requirements are an efficient filter and a good-sized tank at least a metre in length. It is best to forget about plants rooted in the substrate and to be satisfied with decorative stones and pieces of wood. To provide a touch of green a few stems of pondweed (*Egeria densa*) can be allowed to float loose on the water’s surface. If it is available (protected species!) then Java moss (*Vesicularia dubayana*) is also suitable. As in warm water aquaria, this versatile



The highly-bred fancy goldfish varieties are demanding aquarium fishes. This is a calico (variegated) nacreous fantail photo: A.C.S. archives

little plant can be attached (initially with nylon fishing line) to the wood or allowed to cover the bottom (which is more in line with its natural tendencies). Thanks to its wide temperature tolerance (18-28 °C) this tenacious tropical plant (from Indonesia and the Philippines, as well as other south-east Asian countries) will even grow readily in cold water after a short period of acclimatisation! Now and then the mulm stirred up by

the fishes should be siphoned out of the cushions of Java moss, and if it gets too dirty then it should be removed from the aquarium and carefully washed.

Goldfish kept in an aquarium should be fed several times per day, but only small portions at a time. In addition regular partial water changes (say, 20% weekly) should be made, and this way the water will remain clear and unpolluted.

Goldfish can be kept in outdoor ponds, even during the winter months as long as the water does not freeze solid down to the bottom. As a result feral goldfish are found all over Germany, to the despair of conservationists, where their owners have “disposed” of them and they have survived. But most of these fishes lose their striking metallic gleam.



Dwarf fishes from India ... from page 1

as even a little too much could have fatal consequences.

For the upper layer:

The newcomer: the crystal danio (*Danionella* sp.). This scientifically as yet undescribed species (work is in progress on the description) was discovered in November 1999. It grows to just 2 cm and is a very transparent fish. This enchanting dwarf is not at all delicate and eagerly takes any food. It should always be kept in a shoal.

The evergreen: *Chela dadyburjori*. This attractive, up to 4 cm long, species comes from Kerala in southern India. Its bright colours can be seen to best effect if a certain amount of daylight

larger are based on confusion with other barb species. There is hardly any element of the spectrum that does not sparkle somewhere on these active little fishes when the light hits them at the right angle. Their diet should include *Spirulina* algae and a certain amount of mulm should be left in the aquarium for them. They should then live for a long time, to the enjoyment of their owner.

For the bottom:

The newcomer: the longtail cat (*Pseudolaguvia* sp.). Another new species, first discovered during an expedition last November and now being scientifically investigated, but which, to the joy of aquarists



enters the aquarium, but it is still incredibly pretty under artificial light. It is omnivorous, and it too should be kept in a shoal.

For the middle water layers:

The newcomer: the dwarf glassfish (*Pseudambassis* sp.). This up to 3 cm long species is also currently being described, so there is thus no scientific name available at present. When in good health these fishes are amber to copper coloured. The fins are orange, with a narrow white-blue edging in males. They are peaceful fishes that will eat small frozen and live foods. The evergreen: *Barbus phutunio*. This dwarf barb, which grows to about 3 cm, is distributed across large areas of India. Suggestions that it grows

everywhere, is already being exported. It grows to barely 2 cm long, and prefers a sandy substrate and frozen or live foods. Males are chocolate-coloured, females red-brown. This species is very sensitive to high levels of nitrite and nitrate, but is otherwise easy to maintain. The evergreen: *Hara jerdoni*. This approximately 2.5 cm long catfish is the personification of undemandingness, and to be recommended to anyone who likes to keep something a bit out of the ordinary. The females grow somewhat larger and fatter than the males, but there are as yet no reports of successful breeding.

photos: F. Schäfer (except *Danionella* sp.)