

Keeping goldfish according to nature

Set up an
aquarium
in 5 steps

Feeding

Maintenance



 **Sera® guide**

Professional advice for keeping goldfish and coldwater fish according to nature



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Why choose goldfish and other coldwater fish?

If you are planning an aquarium that is fun and educational for the whole family, consider the coldwater aquarium. Coldwater fish, such as goldfish, are often easier to keep, more robust, and less expensive to buy and care for than tropical fish – yet they are lively to watch and available in a brilliant array of warm colors. Unlike many tropical ornamental fish species, goldfish are not shoal fish, but they are very sociable and should not be kept alone.

Goldfish are the oldest ornamental fish known to man. Magnificent golden and reddish colored goldfish were bred in China more than 1000 years ago, and they are still regarded as one of China's symbols of wealth and luck. There are more hybrids of the goldfish than any other fish – although, not every breed is suitable for an easy-to-keep aquarium.

Easy-to-keep coldwater fish



Goldfish

Carassius auratus

“Regular” Goldfish have a slender, elegant shape. Their colors range from golden yellow, orange, and red-dish – to red with white mottles.



Paradise fish

Macropodus opercularis

These are attractive fish whose males are often aggressive towards each other. Be certain to keep only **one** male Paradise fish.

Comet Tail – Sarasa

This is a longer-finned variant of the red-and-white Sarasa goldfish.



Shubunkin

The body and thin shape of this fish resembles that of a normal goldfish. The Shubunkin, however is a blue and orange piebald with black spots distributed evenly over the body.



Sunfish

Lepomis gibbosus

Sunfish are peaceful coldwater fish that add variation in body size and color to a coldwater aquarium.



Special fancy goldfish

Veiltail goldfish have double caudal fins. Their very compact body shape and the prolonged fins are characteristic. You should not keep them together with very active hybrids as they are slow swimmers. Veiltail goldfish hybrids require warmer water (page 9).



Ryukin Veiltail

This Veiltail variant is particularly popular in Japan. It has a short, deep body that is often colored red and white, and a characteristic hump between the head and dorsal fin.



You'll find Veiltail goldfish in a variety of colors and shapes...



...such as this exotic variation.



Pearlscale

The Pearlscale has a well-rounded body, and is easily recognized by its distinctive domeshaped scales – resembling pearl beading.



Red-Cap Oranda

The body shape of this fish resembles that of a Veiltail. Red-caps have a white body with a red “cap” on top of their head.

Lionhead

The name of this fish refers to the colorful excrescence that covers the whole head.



Overbreeding of goldfish has produced hybrids that most likely suffer due to their shape. We do not recommend them for your aquarium and, consequently, have not shown them in this guide.

Aquatic plants

An abundance of plants not only creates a welcoming atmosphere in your aquarium, but plants also play an important role in the biological pollution breakdown process and production of oxygen. You'll find detailed information about keeping aquarium plants in our guide "Splendid plants in your aquarium".

Since goldfish like to nibble at aquatic plants, we suggest buying plants with leathery leaves, such as *Anubias*:



Dwarf Anubias
(*Anubias barteri* var. *nana*)



Congensis
(*Anubias heterophylla*)



Giant Anubias
(*Anubias barteri*)



Water Hyssop
(*Bacopa monnieri*)



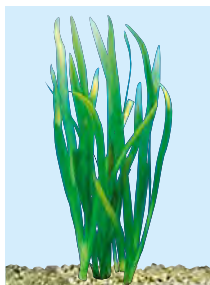
Bleher's Swordplant
(*Echinodorus grisebachii* "Bleherae")



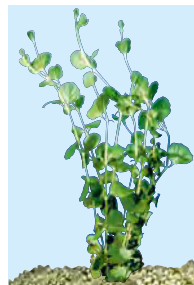
Java Moss
(*Vesicularia dubyana*)



Java Fern
(*Microsorium pteropus*)



Giant Vallisneria
(*Vallisneria spiralis*)



Moneywort
(*Lysimachia nummularia*)

Fast growing plant species such as Hornwort, Brazilian Pennywort and Waterweed are recommended, especially for younger goldfish.

Aquarium setup

Goldfish aquariums have a special appeal due to the big, beautiful and actively swimming goldfish. However, these aquariums got a bad reputation for keeping fish inappropriately in so-called goldfish bowls. The **sera Biotop Cube 130 XXL** allows keeping these interesting and loyal companions according to their requirements.

Water purification is achieved by the **sera fil bioactive external filter 130** which is already included with the kit.

With this newest generation of external filters, **sera** provides crystal clear, biologically clean water in constant quality.

sera bioactive filter system for an immediate start and lasting biological pollutant breakdown within the filter

- Coarse plant and uneaten food particles as well as fish waste are collected by the filter mat (floss) and sponge.
- Purification bacteria and enzymes from **sera filter biostart** decompose the remaining waste particles and convert them into ammonium for further breakdown by **sera bio nitrivec**.
- Purification bacteria working in the filter require special settling space. The biologically active filter medium **sera siporax Professional** provides best settling conditions on a surface of 270 m² per liter (2,900 sq.ft. per US quart).

The best temperatures for keeping goldfish

The optimum water temperature depends on the variety of goldfish you will be keeping. Simple, robust goldfish, such as Shubunkin and Sarasa feel best at room temperature (18 – 24°C / 64 – 75°F), or slightly cooler during winter. Delicate hybrids, such as Veiltails, require temperatures up to 27°C (80°F), making conditions too warm for other hybrids. We recommend the **sera thermometers** to help you recognize instantly when the water temperature is either too high or too low.



5 steps to an aquarium

1 Prepare the ground layer

Fill your aquarium with a maximum 2 cm (0.8 inch) layer of **sera floredepot** plant substrate. Cover this with a 5 cm (2 inch) layer of freshly washed, dark, fine grained aquarium gravel. During the “start” phase, **sera floredepot** supplies the plants with the nutrients they require for strong roots and lush green foliage.



2 Technical equipment

Now you can install the **sera filter** and the **sera aquarium heater**. Build a little underwater landscape from well cleaned rocks and roots from the specialized trade that you have washed with scalding water.



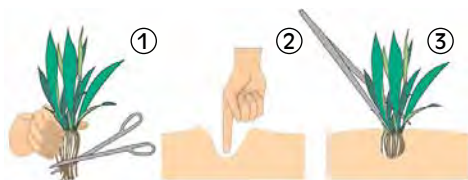
3 Water conditioning

To prevent the water from gouging a hole in the gravel-bed when filling the tank, place a small plate on the gravel to pour the water onto. Use water of approximately (18 – 24 °C / 64 – 75 °F), and fill the aquarium two-thirds full. Remove the plate. Next, condition the water with **sera aquatan** to bind any heavy metals, neutralize chlorine and soluble salts, and help protect the mucous membrane of the fish you will be adding later. Add **sera mineral salt** to provide any missing minerals.



4 Adding plants

- 1) Shorten the root tips slightly with the **sera flore tool S** plant scissors before planting (fig. 1), and remove rotten or frayed leaves.
- 2) Dig a planting hole with your finger into the gravel which has been prepared with **sera floredopot** (fig. 2).
- 3) Carefully put the roots into the hole (fig. 3) and cover them with gravel. Press the gravel carefully and pull the plant slightly with the **sera flore tool P** plant tweezers, so that the roots face downwards again.



Successfully keeping plants becomes easy with the finely adjusted **sera** fertilization system. Use **sera floreplus** as a growth promoter during the first 4 – 6 weeks. The faster the plants grow, the sooner they will contribute to the biological water purification and supply the fish with oxygen. Then start regular fertilization.

Some plants (e.g., *Cabomba*) take up their nutrients mainly via the leaves. These plants are fertilized with **sera florena**.

Other plants, such as *Anubias* and *Cryptocoryne* species, take up the nutrients mainly via the roots. These plants are ideally cared for by means of **sera florenette A**. **sera florenette A** releases the nutrients well dosed over a prolonged period.



Carbon dioxide (CO_2) is an important nutrient for all plants. The carbon dioxide demand, however, differs strongly. Many slowly growing plants (e.g., *Anubias*) have only a low CO_2 demand. The situation is different with rapidly growing species (e.g., *Cabomba*, *Myriophyllum*) and the very decorative red-leaved plants (e.g., tiger lotus, *Nymphaea lotus*): With these, carbon dioxide fertilization is indispensable in order to care for the plants successfully over a prolonged period.

The **sera CO_2 -Start** kit is the reasonable start into the CO_2 fertilization for small aquariums. You will need the **sera flore CO_2 fertilization system** for larger aquariums. It provides a complete set consisting of extremely diffusion-proof parts in particularly high quality. It contains an environmentally friendly re-usable 450 g (15.9 oz.) CO_2 bottle that you can get refilled at your retailer's.

The **seramic pH Controller** regulates CO_2 dosage automatically. This microprocessor controlled unit controls the pH value permanently and keeps it at the desired value constantly by dosed adding of CO_2 .

5 How to add the fish

Now, finally, the aquarium is set up, decorated and planted; filter, heating and lighting work as they should. The **sera** tests reveal good water quality.

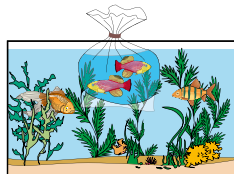
Now the first fishes are introduced. Start the biological pollutant breakdown at the same time.

- Fill the tank with water up to 2 cm (0.8 in.) below the edge. Then add **sera aquatan** (pH value 6.5 – 7.5). Put the filter into operation.
- Add **sera bio nitrivec** one hour after you added **sera aquatan**. **sera bio nitrivec** accelerates activation of the filter bacteria.
- The fish can be added after 24 hours at the soonest.
- Ammonium and nitrite should be checked at least every other day. **sera toxivec** quickly neutralizes too high values.
- Dose **sera bio nitrivec** again after 7 days. From now on, you can use it weekly, after cleaning the filter or after carrying out a partial water change.
- During the start-up phase feed only sparingly using **sera golday** food.

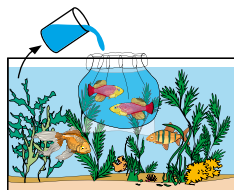


Transfer into a new aquarium means a climate change for the fish. Switch off the aquarium light. Avoid bright light.

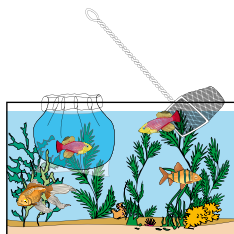
Put the fish bag into the aquarium (opening on top) and make sure the bag floats.



Open the bag and turn up the edges several times. The bag then floats open in the water. Fill aquarium water (approx. the two- or threefold original amount of the bag contents) into the bag in portions within the course of half an hour.



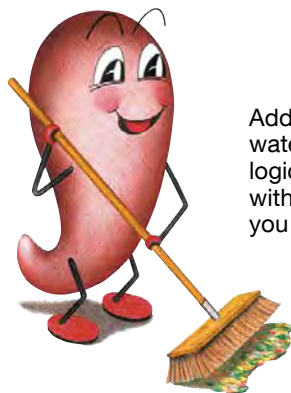
After thirty minutes you can transfer the fish using the **sera fish net**. Be sure to dispose the transport water into the sink!



Goldfish care

sera recommends conducting a partial water change of 25 – 30% once a week. The fresh tap water should be poured into a container, brought to the same temperature as the aquarium water, and conditioned with **sera aquatan** to bind any heavy met-

als and protect the mucous membrane of the goldfish. Pour the water into the aquarium.



Add **sera bio nitrivec** to the aquarium water to ensure quick recovery of the biological purification cycle. Enrich the water with minerals by using **sera mineral salt** if you live in an area with soft water.



We recommend checking a few of the more important water parameters on a weekly basis – and correcting them if necessary. **sera** test kits work with liquid reagents, are simple to use, and can detect even small concentrations. We recommend the following **sera** test kits initially:

- GH Total hardness
- KH Carbonate hardness
- pH value
- NH₄/NH₃ Ammonium/ammonia
- NO₂ Nitrite
- NO₃ Nitrate

For an in-depth look at changing, conditioning, and biologically filtering your water, ask for our **sera guide** “Aquarium care according to nature”.

Even with the best care and feeding, fish can get sick once in a while. In our **sera guide**, “Healthy aquarium fish”, we help you identify the causes that lead to disease, recognize several diseases, and suggest a proactive approach to prevention.



Robust health through proper feeding ...

For high-energy and bright colors, your goldfish need a varied diet that meets their natural requirements. Because their stomach is intestine-like, goldfish must eat frequently but in small amounts. These highly energetic fish require a low protein, high carbohydrate diet that is easily digested. Unlike tropical fish, goldfish are unable to

metabolize excess protein. If protein levels are too high, the fish get fat and the pollution level of the water increases dramatically. A diet that does not meet their natural requirements also leads to fading of their vibrant colors.

sera goldfish foods

sera's special purpose goldfish foods are individually blended from more than 40 ingredients with natural and supplemented vitamins, minerals, and trace elements; and they contain less protein than other **sera** food types for your goldfish's low-protein metabolism. Each **sera** goldfish food is carefully processed – with goldfish in mind – for maximum nutrient retention, easy digestion, and cleaner water conditions.

sera goldy is a flake food for the daily feeding of all goldfish. It is an all-season "power food".

sera goldy gran is a nutritious, particularly easily digestible granulated food for goldfish and other coldwater fish.

sera goldy color spirulina is a color food granulate for goldfish and other coldwater fish. The high Spirulina amount ideally supports the color development of these beautiful fish.

The high quality ingredients of both special foods ensure brilliant colors, healthy growth, a strong immune system, fertility and liveliness.



... and vitamin supplements

Goldfish always appear to be hungry ... but don't let them fool you! Feed them a maximum of three times a day, but only as much as they can eat within a short time. We suggest one fasting day per week as well.

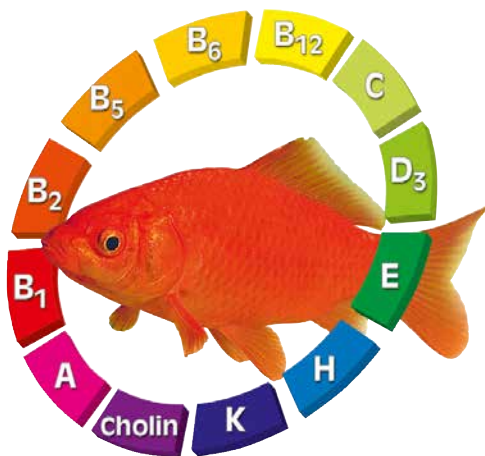
sera recommends feeding your goldfish 2 or 3 different food types to provide a varied diet. Feed one type of food per meal only, and alternate at each meal. Purchase food in small containers only. Opened food quickly goes stale, and the valuable ingredients lose their efficacy.

Vitamins for coldwater fish

Coldwater fish are very agile and consume lots of energy. To help them maintain their vitality and to support their natural immune defenses, we recommend supplementing their diet with vitamins, especially under these circumstances:

- upon introduction to the aquarium
- after each partial water change
- to support recovery
- after diseases
- during the spawning period

sera fishtamin is a liquid vitamin additive that is dripped onto the food.





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For natural aquariums

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