Fish & Ponds

How to Care for Them

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or send an e-mail to:
info@colowatergardensociety.org

Written by Bob Hoffman, originally published 2005
Revised by Bob Hoffman & Edited by Dorothy Martinez 2013

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The Myth

There seems to be a myth about keeping fish with a water garden. Some of us who maintain fish in our water gardens find the fish eat or disturb our water plants, while others find no such problem. I'm one who found that my Koi loved to disturb and eat my water plants. However, I know there are others who will swear their fish are good and would never disturb their plants.

At this point, I have partially solved my problem by providing my Koi a separate pond. I must admit, I do add plant material to their pond, but I start it out in my water garden and then introduce it into their pond after it has established some root structure. The Koi still eat some of the leaves and flowers, but the plant seems to stay ahead of them, or I swap the plant out for another one.

I plan to introduce a different feeding program where I will add more vegetable matter to their menu. I do keep goldfish in my water garden and as long as they stay small, they don't seem to disturb my water plants.

Fish Pond Construction

Ponds should be constructed to one's own tastes and needs, with some basic understanding of fish needs. Fish need protection, space for movement, clean water, and some ice-free water. A fishpond should have some places where fish can hide to protect themselves from other animals and the Summer sun.

Fish need space to move both horizontally and vertically so they can adjust to water temperature changes. A very shallow pond can become very warm in the afternoon sun. Clean water can be achieved not only with mechanical and biological filters, but also with a bog. Passing pond water through a bog filled with plants can filter the water as well as any other type of filter.

Shallow ponds may freeze solid, and this can kill your fish. Ponds not kept open, to some extent, during the Winter may also kill you fish.
For the reasons stated before, I would recommend an "ideal" pond for fish to be one that is a minimum of three feet deep for at least a third of your pond size. Where possible, install a bottom drain and skimmer. A bottom drain is not always possible because of pond location, but they are great for cleaning the pond bottom.

A skimmer keeps the surface debris from falling and sinking into the pond. Waterfalls and small pools are great for collecting debris and much easier to clean than the main pond. Pumps should move at least one-half of the pond's volume of water each hour.

Filtration

When you maintain fish, it is wise to filter the water of fish waste. There are many ways to filter the water and some methods are better than others. I will discuss how I filter my ponds and you may wish to do it differently. I filter my water garden pond with an up-flow filter. My up-flow filter passes the water from the top of a 55-gallon container through a three-inch pipe. The pipe sits on a grate that is supported 8" off the bottom of the container by pieces of 3" pipe.

I place large rocks, lava, pea gravel, and sand or Balance (a ceramic like rock) on top of the grate. This mixture should come just under the outlet to the pond. A flush valve should be placed at the bottom of the container. Both the exit to the pond and the flush valve should be at least 2". I constructed a blowpipe out of 1" PVC pipe, which allows me to force air through the rocks. The piece sitting on the grate should look like a square or rectangle with holes drilled into the PVC.

The blowpipe extends from the square or rectangle up past the 3" inlet. Water enters the 3" inlet pipe at the top, travels down to the bottom, up through the rock, and out the outlet pipe to the pond.

My Koi pond has a pre-filter for large material removal that uses bio-balls for a filter medium. The in-line pump has its own filter as well as a large bead filter to complete the filtering process. You should over size your filter for Koi because, if the fish load increases, changing your filter size later is much more difficult. If you have green water use a UV light to kill the algae.

Animals

There are both four-legged and feathered pests who are attracted to fish of any kind. I have not found a foolproof answer to discouraging these kinds of animals, but there are some general hints I can pass along. A shallow pond 18" to 24" or less is an invitation to all animals. Container gardens with fish are also invitations to animals. Other kinds of pond creatures (i.e. frogs) tend to draw feeding animals.

There are many types of contraptions made that may limit your animal encounters, but I have not found any too successful. The best advice is to build a deep pond, 3' or better, with no ledges. This is great for viewing fish, but not so good for water plants.

My water garden pond is about 3' deep in the middle, with two rows of shelves. The first shelf is 1' deep and the second shelf is about 18" deep. In the Summer, I split the deep part of the pond into thirds. I place two cement blocks into the pond and then I place a large stepping stone on top of the cement blocks. As I sink the cement blocks, I place a board under them so they will not harm the liner. These stands provide protection for the fish and also act as stands for the water lilies.

I lost many goldfish to the Blue Heron, but after many weeks, I found some of them avoided the Heron's beak and stayed hidden. I lost no Koi to the Heron because their pond is deep (4') with only the pond sides to stand on and it is covered with bird netting.
The best product to keep animals out of your pond is bird netting, but it has its drawbacks for water gardens, where tall plants make the netting almost impossible to use. I used it successfully on my Koi pond because the pond is raised a few inches above the water, so it didn't impede the height of the water plants.

Winterizing

Keeping fish over the Winter is not a problem. The trick is to keep some portion of the water open year round. This is done by running a pump or stock tank heater. This past year I ran a pump in my Koi pond that was just below the surface and bubbled up to the surface. Don't place the pump at the bottom of the pond because you will be circulating cold water from the surface with warm water from the bottom and the overall pond water will be colder. Try to stabilize the temperature at the bottom of the pond because that is where the fish will stay throughout the Winter months. In my water garden pond, I ran my waterfall with the pump under the waterfall and disconnected my filter so it wouldn't freeze.

Salt

In my Koi pond, I remove all my plants and add about 20 lbs. of salt in late Autumn and/or Spring. The salt must be non-ionized – I use solar salt. The salt helps protect your fish during the Winter months. Just a note, while working at Ocean Journey I saw them adding salt to the freshwater fish tanks and I asked them about the salt and they confirmed it protects the fish from disease.

Water Quality

Water quality is more essential for raising Koi than goldfish. Goldfish seem to be more tolerant of their water environment than Koi. In the Summer, I mix the Koi and water garden pond water. In the Winter, the two bodies of water are separate.

When adding new fish to your pond I float the bag of fish in the pond for 30 minutes so the water in the bag is the same temperature as the pond. For new Koi, it is recommended you place them in a holding pond/tank for at least two weeks before they are released into you pond. This quarantine period is to ensure your new fish are healthy before you release them into the main pond.

You need to keep the holding pond/tank clean with a pump and filter. Any items used in the holding pond/tank should not be used in the main pond to prevent contamination. If you have only one net, dip the net into a solution of Clorox and water when you exchange it between your holding pond/tank and pond.

When you add water to your pond, be sure to add some dechlorinator. For Koi, I like a product called Stress Coat® from Pond Care® that removes the chlorine and replaces the natural slim coating of the fish. There is also a product call Crystal Clear Vanish® that works quite well in removing chlorine and chloramine.