

## **"All about Koi" Fact Sheet**

**Monte McQuade, of Washington Koi & Water Garden Society, a Certified Koi Keeper, provided answers to questions about koi from Unit 86 members during his presentation in November 2019:**

**How long do koi live?** In Puget Sound they live about 5-7 years with very little care. When well cared for, up to 30 years, wild carp possibly longer. All koi are Cyprinid Carp, the common carp.

**How big do koi get? How much do they weigh?** Koi varieties have several different body types. In an outdoor pond in Puget Sound koi may reach 18-22". If kept warm with lots of food and a clean environment, 24-30". In Japan, some koi may reach about 48". It is very hard to say how much they weigh. Koi are usually measured by length instead. A 22" fish could weigh 5 pounds, or up to 10 pounds.

**How many are born in a year?** Large female koi can carry up to 250,000 eggs. During and after spawning, many of these eggs are eaten by the other fish. Maybe 50,000 are fertilized and live through to be a few days old, starting their lives at about 1/4" long. Of these many have genetic defects and succumb to diseases. In nature only a few will survive their first years. Koi produce pheromones when a pond is overpopulated that may prevent any of the fish from spawning.

**Does the size and longevity depend upon the variety of koi?** Some varieties of Koi are long and skinny. Others can be short and fat. This is in their genes. The size of a koi and its health leading to longevity depends upon its care and environment.

**How do you know if a koi is sick?** Its behavior often changes, and it will usually isolate itself from the herd.

**What determines their color? Are they born with their adult colors?** Genetics determines the variety or color pattern. Most varieties are born looking much like their Oyagoi (parents). Some varieties take up to 5-6 years to develop their full coloration.

**What do the fish eat in the Japanese Garden? What happens in winter?** Carp are slow water fish and generally forage off the bottom of their environment. They eat mosquito larvae, tadpoles, crustaceans, and other bugs they come across, if available. They are not hunters like bass,

pike, or salmon. Koi, having been bred, have become conditioned to eat manmade foods—both floating and sinking pellets. Given a choice, they prefer sinking food. In winter the fish go into a state of torpor as the water temperature drops. They reduce the amount they eat and survive, eating very little until the water begins to warm in spring.

**Can koi or goldfish freeze and survive?** No. Koi can live in water temperatures down to 38° F. and goldfish down to 34 F. The water temperatures are seasonal and change slowly, giving the fish time to adapt. Even with ice on the water's surface, the earth's heat usually provides some portion of the Japanese Garden pond with nearly 40° water. The fish will probably congregate in these places during winter. In shallower water this may not be the case, and people may have other experiences. A koi pond here in Puget Sound should have some water that is at least 4 feet deep.

**How much space or water do koi need?** In a small back yard pond that is adequately filtered, koi need at least a couple hundred gallons of water per fish. They will survive but probably not grow well and could become sick easily. Many koi keepers keep 1000 gallons per fish and have large filtration systems at their ponds.

**What preys upon koi?** Depending on pond design, placement of plants and trees and the size of the koi, the list of predators could include dragonfly larvae, frogs, snakes, turtles, ducks, rats, cats, other fish including big koi (by accident), raccoons, kingfisher, osprey, eagles, and our favorite, herons of all shapes and sizes. The list includes anything that likes fish.

**Do koi eat plants?** Usually, no. Koi are seen grazing (that is why a school of koi is called a herd) across the rocks and bottom of koi ponds. This is not so much to eat the algae but to suck bugs and crustaceans that use it as their home. When rooting through water lilies and other water plants, they are looking for bugs on the plants as well as grubs or bugs that live in the mud they are planted in. Some of the algae and plant material does get sucked in and swallowed but it is not their staple diet.

**How much do koi cost?** From a few dollars to many thousands of dollars, depending on the size and quality of the fish being purchased. Most koi are only worth about \$200. A grand champion of a noted koi show may fetch a few thousand dollars. The winner of the All Japan Koi Show may fetch a few hundred thousand dollars. It all depends upon where you shop.