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## The Impact of Koi Carp and Goldfish

### What are Koi Carp and Goldfish?

Koi Carp (*Cyprinus carpio*) and Goldfish (*Carassius auratus*) are popular, colourful fish that many people keep in ponds and aquariums. While they may be common, they are not native to Western Australia's waterways and the presence of these invasive species impacts our beautiful natural environment.

### How they got here

Koi Carp and Goldfish have been introduced to Western Australia in two main ways:

- **Deliberate Releases:** Many people release these fish into local waterways when they no longer want them as pets.
- **Escapes from Ponds or Fish Farms:** Some Koi Carp escape from fish farms and enter natural water systems.

### Impact on our wetlands and native species

- **Invasive Species:** Koi Carp and Goldfish are not native to Western Australia. They reproduce quickly, which disrupts local ecosystems and makes it hard for native fish species to survive.
- **Predation and Competition:** In the south-west of Western Australia, 82% of fish species are unique and 55% are endangered. Koi Carp and Goldfish threaten these native fish by competing for food and damaging their habitats. They also eat their eggs and young, which impacts the ability of these native species to maintain their populations.
- **Habitat Damage:** Koi Carp have a unique way of feeding. They suck in sediment from the bottom of the water and filter it through their gills. This feeding method damages the environment by uprooting plants and stirring up sediments, which leads to a loss of habitat for native fish and reduces water clarity. This stops light from reaching underwater plants and can affect native fish that rely on clear water for visual hunting.
- **Fast Reproduction:** Koi Carp breed very quickly. A single large female can easily carry up to 1 million eggs. This rapid breeding makes it very hard to get rid of them once they establish a population.
- **Disease Spread:** Both Koi Carp and Goldfish can carry diseases, which can impact native fish species.



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## How you can help

- **Don't Feed Fish:** Don't feed fish in local lakes and wetlands. Feeding can encourage the growth of feral fish populations like Koi Carp and Goldfish, making the problem worse. It can also lead to poor water quality.
- **Never Release Fish:** Never release Koi Carp, Goldfish, or any other ornamental fish into local lakes, rivers, wetlands or even drains and stormwater sumps. This introduces these harmful, invasive species into our natural areas and will negatively impact native ecosystems.
- **Dispose of Fish Humanely:** If you catch Koi Carp or Goldfish, please dispose of them humanely. Do not release them back into the water.
- **Educate Others:** Share information about the impact of Koi Carp and Goldfish with your friends and family.

## By managing Koi Carp and Goldfish in our urban wetlands, we can better support our native fish species.

These native species play an important role in maintaining a healthy natural environment. For example, some native fish help control mosquito populations by eating mosquito larvae, which is good for public health. Native fish also contribute to the food web, serving as food for larger animals and helping to keep the ecosystem balanced. By protecting our native fish, we're not just preserving unique species, but also maintaining healthy waterways.

## References

Government of Western Australia Department of Water and Environmental Regulation. 2024. Common carp – *Cyprinus carpio*. <https://rivers.dwer.wa.gov.au/species/cyprinus-carpio/>.

Healthy Wildlife Healthy Lives. 2017. Feral fishes. <https://healthywildlife.perthnrm.com/wp-content/uploads/sites/5/2017/10/Information-Sheet-Feral-Fishes-Healthy-Wildlife-14-08-2017.pdf>.

Kırkağaç, Mine & Demir, Nilsun. 2004. The Effects of Grass Carp on Aquatic Plants, Plankton and Benthos in Ponds. *Journal of Aquatic Plant Management*. 42. 32-39.

The State of Victoria Department of Environment, Land, Water and Planning. 2017. Impacts of Carp in Wetlands. [https://www.water.vic.gov.au/\\_\\_data/assets/pdf\\_file/0032/671684/impacts-of-carp-in-wetlands-fact-sheet-4.pdf](https://www.water.vic.gov.au/__data/assets/pdf_file/0032/671684/impacts-of-carp-in-wetlands-fact-sheet-4.pdf).

Zhang, Xiufeng & Liu, Zhengwen & Jeppesen, Erik & Taylor, William & Rudstam, Lars. 2016. Effects of benthic-feeding common carp and filter-feeding silver carp on benthic-pelagic coupling: Implications for shallow lake management. *Ecological Engineering*. 88. 256-264. 10.1016/j.ecoleng.2015.12.039.