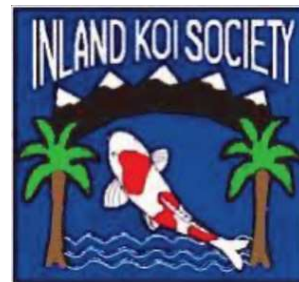


The Inland *Koi Connection*



THE OFFICIAL
NEWSLETTER
OF **IKS**
ISSUE 315
MAY 2025

SUNDAY 5/25/25

WWW.INLANDKOISOCIETY.ORG



IKS GENERAL MEETING

2:00 PM

SUNDAY, MAY 25TH

MYSTIC KOI & WATER GARDENS

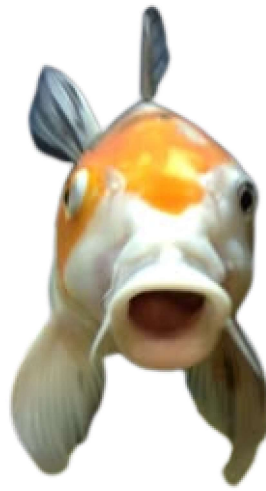
1250 W ARROW HWY,
UPLAND, 91786



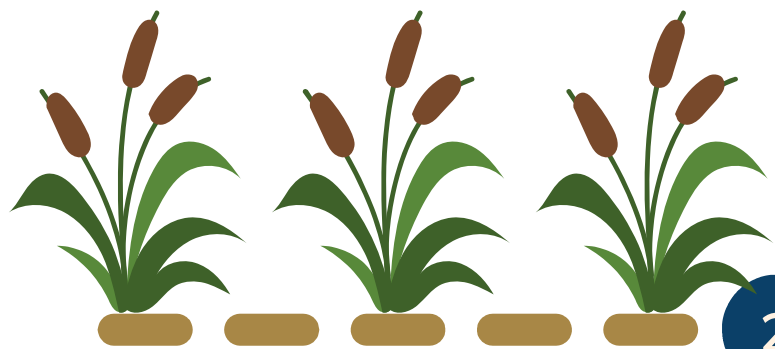
Come join us at **Mystic Koi & Water Gardens** for our **May general meeting!!** This wonderful establishment offers a vast selection of **high-quality** Japanese koi, pond supplies, as well as **expert advice** if you have any questions or need help with your own pond at home!!



Although **Mystic Koi** is typically not open on Sundays, we express our **deepest gratitude** that they are allowing **The Inland Koi Society** to pay a visit for our meeting on **Sunday 25th !**



Whether you're starting a new pond, enhancing your existing one or just want to see what Mystic Koi has to offer, now is the perfect time!



This article is written to be as easy to read as possible for those who would like the simplest explanation of the complex subject of anoxic filtration.

Take a mesh basket, fill it with cat litter, then scoop out a depression from the center and fill that depression with an aquarium plant fertilizer called Laterite. Put a plant into the basket if you wish, but it is not necessary.

It is easy to build an anoxic filtration system but the way it works is extremely complicated. So let us begin by explaining what Laterite, biocenosis and anoxic mean.

- **Laterite:** It is a clay-based material that is rich in iron. It is used in fish tanks as a plant fertilizer. If Laterite is difficult to find, you can substitute Ironite 101, an iron-rich garden fertilizer.

- **Biocenosis:** A scientific term for a place where different biological processes take place, each process being of mutual benefit to the other processes.

- **Anoxic:** Anoxic is not the same as anaerobic. Anaerobic means there is a complete absence of oxygen. Anoxic means oxygen is present at a very low level. In an anoxic basket there is always a low level of oxygen, typically between 0.5 ppm and 2 ppm. This is the crucial factor that allows anoxic filtration to occur. In contrast, the oxygen level in the pond itself should be an absolute minimum of 6 ppm, although higher is recommended.

With the first few terms explained, it is now possible to understand how the anoxic filter system is unlike any filter system commonly used by pond keepers. To contrast anoxic filtration with conventional filtration, it is first necessary to understand how conventional biological filters work.

Any well-designed conventional biological filter system will be effective at taking the ammonia excreted by our fish and converting it, first into nitrite, and then into nitrate by a process called the “nitrification cycle.” Having achieved the conversion of ammonia into nitrate, the task of a conventional biological filter is complete. There is no further biological action to remove the nitrate and so the level of nitrate slowly rises.

The first disadvantage of conventional bio-filter systems is the rising nitrate level. Nitrate is nowhere near as toxic as ammonia or nitrite, but it still has a negative effect on our koi. Nitrate is a plant fertilizer and will encourage blanket weed and green water algae. Water changes will help but after a 10% water change, the nitrate level will still be 90% of the original value. As more ammonia is converted, the nitrate level will soon begin rising again.

The second disadvantage with some conventional biological systems is that the biological media can become anaerobic. This will not occur with moving media such as aerated K1. Flowing water through static media deposits particulate matter, leading to potential blockage. A blocked conventional biological filter can become anaerobic and much less efficient in performing the nitrification cycle.

The anoxic filtration system overcomes both disadvantages of conventional biological filtration.

Although some nitrification will occur in the pond, in the plumbing and on the thin outside layer of the baskets, the anoxic system does not rely on the normal nitrification cycle of converting ammonia to nitrite and then to nitrate. At the center of the basket is Laterite (or Ironite 101) which is rich in iron and has a negative charge. The molecules of ammonia (NH_4^+) have a positive charge and are drawn to the center of the basket. Water is not drawn into the basket. In the interior of the basket are a class of facultative bacteria that function in low oxygen environments. These bacteria consume the ammonia/nitrogen compounds. Plants will also remove these ammonias.

Once the basket is submerged, water does not flow through the basket. Without the water flowing through, particulates are not deposited within the media. A properly constructed anoxic filtration system will not become anaerobic.

Among the many benefits of an Anoxic Filtration System are improved water quality, especially very low nitrates, and less or no blanket weed or floating algae. For our koi, the benefits include better health, improved skin quality, reduced shimmies and much more intense colors

The anoxic filtration system was designed and developed over many years by Kevin Novak, Ph.D. More information on Anoxic Filtration by Syd Mitchell is available at www.mankysanke.co.uk Home and from Koi Organisation International 311 Anoxic Filtration | K.O.I.

Many thanks to Dr. Novak and Syd Mitchell for providing the information



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- **Theo Zoetemelk** ~ 951.735.9896
@inlandkoi society.org

Upcoming Events

05 25~ IKS General/Potluck meeting
2:00 pm
Mystic Koi
1250 W Arrow Hwy, Upland, 91786

06 22 ~ IKS Board Meeting
12:30 pm
Linda Kushner
Interested members are welcome to attend, but please call hosts to let them know beforehand, 951.520.0092

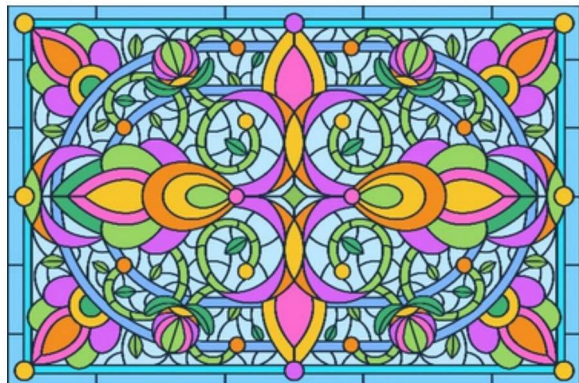
06 22~ IKS General/Potluck meeting
Linda Kushner
1556 Vandagriff Way Corona, California 92883

07 27 ~ IKS Board Meeting
12:30 pm
Rob & Deanna Fales
Interested members are welcome to attend, but please call hosts to let them know beforehand 951.279.0181



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May 2025



Artist Wanted!

- Stained Glass, Painting, or ??? Design and
- Execute 2025 Spike Cover Award Price to be
- negotiated For more information,
- pattist@snet.net



TIPOF THE MONTH

Do You Need to Catch a Koi?

Netting and Bowling Can be done by 1 person!

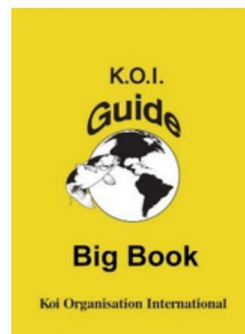
- Place Bowl in Water and Allow to Fill (it still floats)
- Use an Angled Net Fitting



- Slowly maneuver net UNDER Koi
- Slowly raise Koi to the surface
- Use Net to press edge of bowl down and get Koi into Bowl – without lifting Koi from water
- Tip Bowl Towards You to remove enough water to lift bowl to land.

Angled Net Fitting:

<https://koiorganisationinternational.org/catalog/sale-items>



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Page List: <https://koiorganisationinternational.org/members-lounge>

Membership perks:

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Bacteriology Course Underway!

For MKK Certification or Insatiably Curious Koi owners!

<https://koiorganisationinternational.org/product/315-advanced-bacteriology>

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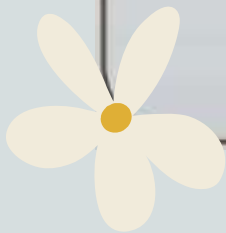
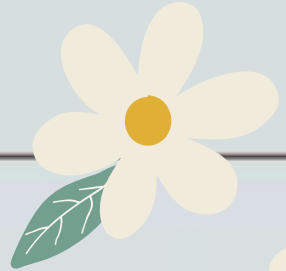
Thank you to **Chien Lee of Nijikawa USA** and to **Iva Gaglione of Ultra Balance** for supplying the Inland Koi Society with a supply of nutritional koi food for its rehoming program!!!





INLAND KOI SOCIETY
5198 ARLINGTON AVE., #146
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Return Service Requested



Visit Our Website www.inlandkoiociety.org