

The Inland Koi Connection

THE OFFICIAL NEWSLETTER OF IKS • ISSUE 286 • JUNE 2022



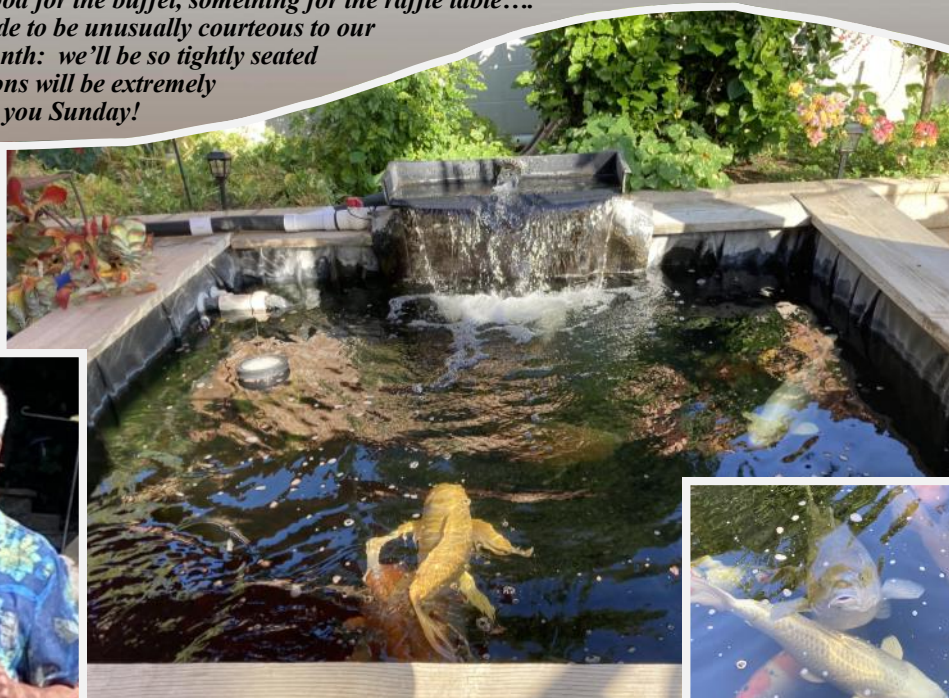
Sunday, June 26 Potluck Meeting Hosted by Scott Zehm ~ 3-6pm 6726 Dove Lane, Riverside 92506 ~ 951.237.2508

We will be close and cozy visiting **Scott Zehm's** pond this month: the patio area surrounds the pond on three sides, raised planters across the back and side property-line fence are full of interesting and exotic plants that hide filter equipment, a dining room on one side and a sun room on the other open out to the patio, while the kitchen between them overlooks the pond. It's compact space but we believe we can all fit in...just not a lot of room to roam. Parking is also tight; park wherever you can, if not on Dove Lane, then on only the south side of Stone Gate Drive. [Use your smaller vehicle :-)] We will enter thru the gate to the right of the garage, and there will be garage-style seating in the sun room. Our speaker today will be **Ed Broomfield**, C.K.K., with a discussion of *Koi Health*.

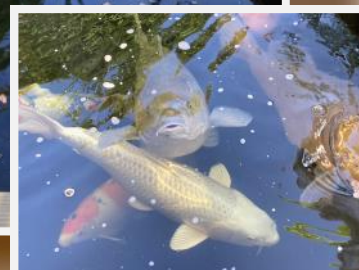
Scott's pond was constructed in February 2018 by his gardener. It's a liner pond of 3,000 gallons including the filtration and plumbing. They used a GCTek 6.0cu ft bead and media filter, plus a 57-watt stainless steel UV, and a 2-gallon basket pre-filter. The filtration pump is a 1/4hp Sequence pump, and there's also a supplemental trickle-tower filter. Scott has spent years maintaining other peoples' ponds, so you know his water is polished! And his koi are impressive...and very friendly!

*Bring chairs, food for the buffet, something for the raffle....
and please decide to be unusually courteous to our
speaker this month: we'll be so tightly seated
that conversations will be extremely
distracting. See you Sunday!*

*Coming in off
Victoria, the
gate code is
#2100*



Scott Zehm, speaking at May meeting



NOTES FROM JUNE 5 IKS BOARD MEETING

- **The IKS Board** met at the Kushners' for dinner and planning.
- **Meetings:** Hosts are still needed for a 25 September meeting, and then for the new year. Please contact Brenda Aker to offer your pond for a visit. Agreed to postpone a field trip to Barstow until 2023, taking into account both bus and gas prices.
- **Treasury:** The board is studying options for purchasing a shipping container for storing club equipment instead of paying monthly for a storage unit. We have a place to house it if one is found.
- **Rescue:** Ed has 40 fish in QT, his max, and will start selling some on Craig's List. Scheduled a rescue in mid-June in Riverside. **All QT koi are available for purchase, \$50-\$200 depending on size and quality... less than retail! Contact Ed Kushner.**
- **Koi Auction:** Plans began in earnest for an auction on Saturday, October.22, in Riverside. **Nick Milfeld & Larry Leverett** agreed to co-chair the event. It takes about 40 people to run the event, and to prepare the lunch that's goes with registering as a Bidder, so sign-ups to work the auction will begin at the June meeting. Please reserve the date on your calendars and plan to participate; you'll be surprised at what you'll learn about handling koi and how the day pulls the members together. Begin scrutinizing your koi: Will you sell some? Invest in a couple more?
- **Directory:** Peggy is working on the updated Directory and needs member photos; please come Sunday expecting pictures to be taken.

Welcome to our Newest Members ~ look for unfamiliar faces and greet them!

Eric, Wyatt Rice ~ Charlene Peters (4/22)
5930 Cartland Drive, Riverside 92506
714.875.4250 ~ rice.eric@charter.net

Paul & Angel Palacios (2/22)
42299 Oregon Trail, Murrieta 92562
951.712.2631 ~ dr.breeze@hotmail.com

Howard & Kimberly Newton (12/21)
43200 Vista Bonita, Temecula 92590
949.285.9902 ~ 949.285.1679
NewtonAvocadoManor@gmail.com

Richard & Janna Grushen (10/21)
Wildomar ~ koikeeper@ca.rr.com

Raymond Aguilar (9/21)
Norco ~ 951.275.2446 ~ xrayra@gmail.com

David & Belinda San Jose (9/21)
Rowland Heights

Jason & Kristine Zara (9/21)
Fontana ~ J 760.970.9338 ~ K 760.970.9334

Look for these members & welcome them back:
John & Cricket Mouw ~ Riverside

6/5	IKS BOARD MTG ~ 5:30pm / Host Ed & Linda Kushner
6/26	Potluck Mtg ~ 3-6pm ~ Host Scott Zehm, 6726 Dove Lane, Riverside 92506 ~ 951.237.2508 Program: Ed Broomfield, "Koi Health" ~ Auction Talk
7/10	IKS BOARD MTG ~ 5:30 pm / Host Theo Zoetemelk, 1407 Second Street, Norco 92860 ~ 951.735.9896 ~ Interested members are welcome: call ahead to confirm
7/31	Potluck Mtg ~ 3-6pm ~ Hosts Ben & Reiko Israel, 10361 Sun Grove Circle, Riverside 92503 ~ 714.851.5186 ~ Program: "How to Set Up a Temporary Quarantine Tank"
8/7	IKS BOARD MTG ~ 5:30pm / Host Nick & Peggy Milfeld, 1644 Northhampton Dr, Riverside 92506 ~ 951.892.4269 ~ Interested members are welcome: call ahead to confirm
8/28	Potluck Mtg ~ 3-6pm ~ Hosts John & Cricket Mouw, 16187 Porter Ave., Riverside 92504 ~ 951.776.8323

2021 OFFICERS & DIRECTORS

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Ed Kushner, President 951.520.0092
Koi Re-Homing ~ Web Liaison

Brenda Aker, V.P. 951.316.0263
Meeting Sites & Speakers

Monica Dirac, Secretary 909.887.7497
Nick Milfeld, Treasurer 951.780.7395

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Rob & Deanna Fales 951.279.0181
Raffles ~ Koi Re-Homing

Larry Leverett 951.781.3887
Properties Manager

Linda Kushner 951.520.0092
Alvin Watson 951.764.6387

Scott Zehm 951.237.2508
Theo Zoetemelk 951.735.9896

Buffet & Banquet Supplies



Francine Hoffman has been an IKS member 12 years this month; she has hosted meetings and was featured on our 2014 Pond Tour. What I've always loved about her home and gardens is the number of people who can get lost and spend a private afternoon in any of the many cozy areas she has created, without intruding on anyone else's conversation or space. Prefer shade, sun, or a place by the ponds? There's a special space just for you.



And just one of the things I've always admired about **Francine** is how strikingly she wears red; seems it's her signature color which she uses throughout her landscape to tie it all together.

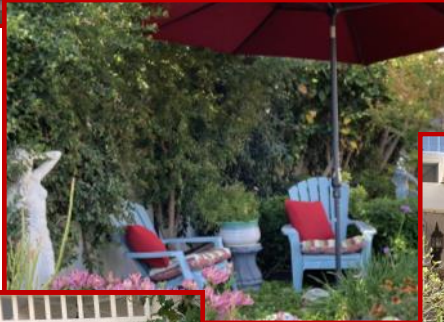
Besides all the garden and pond seating, a covered patio wraps around two sides of the house, and if I'm not mistaken, there's also an open deck upstairs of the patio. Wonderful!

Only 39 members attended in June, and more than usual brought main dishes, so there was a lot to enjoy. It took a while to gather everyone in from their explorations, so lunch began just before 3:00. **Ed** introduced our newest members from Riverside, **Eric Rice**, and his son **Wyatt**. Francine shared a history of her pond, and then **Orville** explained the construction and filtration. The pond has an upflow filter which goes to the waterfalls, with a UV in the skimmer .

When the pond was finished, the traditional few goldfish were added to test the water; they multiplied like rabbits so a second pond was built for them.

Ed Broomfield talked of K.O.I., *Koi Organisation International*, of which IKS is a member, encouraging individual membership, then the mike was

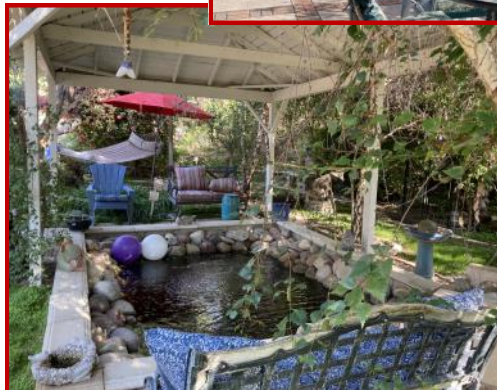
given to **Scott Zehm** to teach about *Emergency Preparedness* [to pg 7]



covered patio ►
gazebo ◀



▼ goldfish pond



The control of the concentration and composition of body fluids is known as osmoregulation.

The body fluids of a koi contain more dissolved salts and ions than the surrounding water. Just as human blood is 'salty' with about 0.9% by weight, koi blood has exactly the same 'saltiness', which also happens to be exactly the same as the ocean, from which we all come!

“As a result of this imbalance there is a constant IN-FLUX of water into the koi's body and a loss of salts and ions from the blood outwards (water always moves across a membrane towards the higher concentration of salt). A similar effect occurs if you put a dried raisin or apricot into distilled water. There is a net influx of water molecules through the skin of the dried fruit and it swells up to look like a grape again. (Try it!)

Water always moves across a membrane towards the higher concentration of salt.

The mechanism of osmoregulation may seem complex but essentially a Koi has to rid its body of excess in-flowing water by constantly excreting a weak solution of urine. Koi urinate approximately 30% of their body mass each day in order to osmoregulate! Salts are removed from the urine before it is excreted (fish are not wasters) and salts are also actively taken up from the water by way of the gills in order to maintain internal salt levels. This constant active absorption of the salts requires energy, but is essential to the fish's survival, and anything that affects this osmoregulatory function will have serious effects on the health or even survival of the koi.” {See footnote for source.}

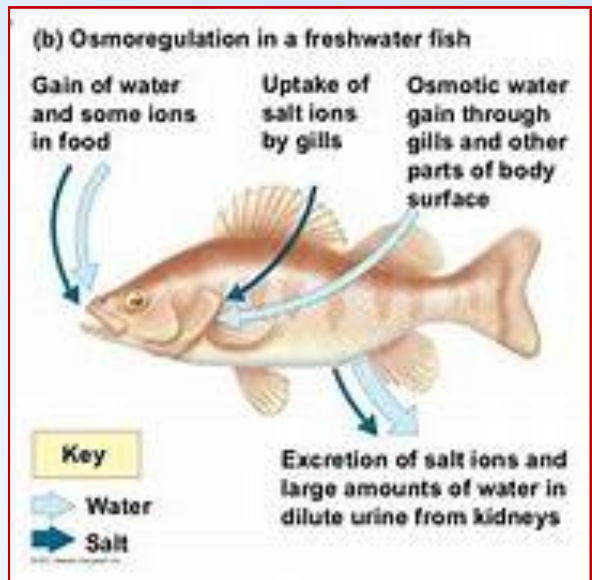
Koi urinate approximately 30% of their body mass each day in order to osmoregulate!

Koi constantly use energy to osmoregulate or maintain their salt-to-water balance by keeping salt in and water out. When the koi doesn't have enough energy to prevent the water getting into its system or cannot remove the water through its kidneys, the koi may 'pinecone' and develops a condition called Dropsy. Dropsy is a symptom that the koi cannot maintain osmoregulation, and it may be caused by many reasons, all of which include stress.



Photo Caption:
Koi with Dropsy
or "pinecone"

One of the best arguments for the use of a 'hospital tank' to treat sick fish is that you may add salt without adding it to the entire pond to decrease the amount of energy required for the koi's osmoregulation. It works like this: The koi's blood is 0.9% salt, and the water has 0% salt, so the koi is working to push excess water out of its body (and keep salt in its body) against a 0.9% gradient. If you salt the water of the tank with 0.3% by volume, then the gradient that the koi has to work against is reduced by that 0.3%, making the new gradient 0.6%, and then osmoregulation only requires 2/3 the energy. If you salt the water to 0.6% (the max generally tolerated by koi), then the gradient is only 0.3%, and the koi now has 2/3 more energy available to recruit towards healing and recovery.



K.O.I. recommends that salt only be used in a tank (rather than in your whole pond) because it is so darn hard to get rid of and may affect treatments and other aspects of water chemistry. As a little thought experiment, imagine a pond with 0.6 salt, and that you are ►

using 25% water changes to get rid of the salt (most pond owners rarely do more than 5-10% water changes, so this is a 'best case' scenario using BIG water changes). Say you do six of the 25% water changes in a row (and you know how much work that is, because you can't just top off the water, you must actually pump out 25% each time! *Yikes!*) – How much salt still remains? The answer is half! After knocking yourself out to do six big water changes, you are still at 0.3% salt, which is enough to kill virtually all plants! (So be extra careful where you pump out the salty water – make sure it's not on your lawn or flower beds. Most plants can only tolerate 0.007% salt, and 0.3% is 43 times as much salt as most plants can tolerate!)

Anything that affects this osmoregulatory function will have serious effects on the health or even survival of the koi.

Another reason to use a 'hospital tank' is to bring the koi closer to your eye for good observation. The best thing you can learn to do is to be a good observer. NEVER treat parasites or bacterial infections unless you know exactly which parasite or which bacteria you are fighting! If you do need to treat, it will cost significantly less to purchase the amount needed for a tank vs. the amount needed for your pond. If you need help diagnosing a problem, seek out a K.O.I. Certified Koi Keeper, or even better – take some courses yourself! *

Remember that stress is at the root of nearly every problem that koi can have. Learn to be a good observer – and learn to reduce stress in your pond – and you will have healthier koi and be less stressed yourself!



Article by Karen Pattist, K.O.I.

Footnote: Quoted from *Koi Health Quarterly*, Winter 94/95. Reprinted by K.O.I. with specific permission

* See a list of currently available courses here:

<https://koiorganisationinternational.org/courses>



Norco High School Honors Theo Zoetemelk Honorary Member Norco FFA

Building a koi pond on the Norco High School campus was an idea that Theo brought to the IKS Board of Directors a few years ago.

It was more than just making a pond though; his desire was to expose a new generation to the fun of koi, hoping that the seed so planted

would grow into a desire to build a pond at home, introducing the whole family to a sharable hobby. In so doing, he hoped to develop a new membership base for IKS—and other koi clubs—because, admittedly, we are an aging group. Theo saw not only the teens but the parents and extended families as potential future members.

To that end, a core group of IKS members worked with him, and the Board agreed to grant \$500 towards it. With hopes that other koi clubs would help other high schools, particularly those with FFA programs, to build their own ponds, an illustrated booklet was planned giving detailed instructions and koi information.

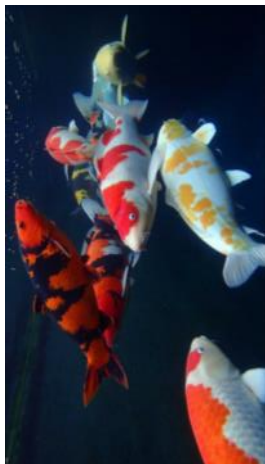
Last month Theo spent a day training students to blow out the barrel filters and do other maintenance, when the teacher invited him and Jeanne to the annual recognition banquet for the FFA program, which at Norco includes not only "farming" and animal husbandry but landscape practices, which is what made the idea of a pond such a perfect fit for the course work on water features.

At one point during the banquet, Theo was called forward and they totally surprised him, honoring him as an Honorary Member of the Norco High School *Future Farmers of America*.

Other IKS members who worked on the project were Rob & Deana Fales, Eric Fales (who did the schematic drawings for the booklet), Larry Leverett, Tom Wright, and, I know, others that I've missed. Students did all the work, from digging to introducing koi, donated from our rescued koi, into the finished pond, led at each step by their IKS mentors. Still in the planning is a general meeting on campus to see the finished pond and meet its student caretakers. 🐾



This POND SIDE talk, done by our own **Spike Cover**, sounds like it would have been an excellent opportunity to hear from one of the most knowledgeable koi keepers we know. And I apologize that I didn't see the information soon enough to share it with you. I wish I'd had it for the last newsletter because the presentation was so early in this month. Just some of the really good stuff **K.O.I.** has!



K.O.I.™ News!

Koi Organisation International
Current Accurate Useful

June 2022



**Spike Cover – PONDSIDE Online
or at PNKCA Convention
Sat, June 4, 1:30 Pacific Time**

Improve Your **F U**



Make your life easier

- Automate better waste removal
- Easier filter cleaning
- Automatic pond refill system
- Feed automatically

Create a better koi environment

- Add filtration
- Easier water changes
- Better aeration
- Better circulation
- Eliminate green water
- Increased Pond Volume

More tips and tricks!

<https://koiorganisationinternational.org/new-renewal-perks-2022>

YOU
CAN
HELP



Membership Coordinator Needed!

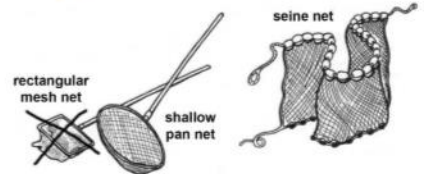
Can you spare 2-3 hours per MONTH?

- GIVE BACK to your hobby!
- Help others learn about Koi.
- Work at home, whenever convenient.
- We will train you.

Contact: pattist@snet.net

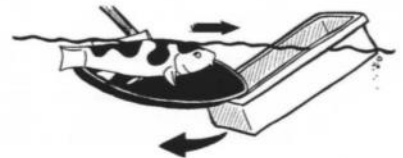


TIP OF THE MONTH



Net and Tub (Bowl) Properly

- The common (deep) rectangular mesh-net is NOT suitable for Koi!
- Use a large, shallow, pan net (as pictured above) so you don't damage fins and scales.
- A Seine Net can be used to corral the Koi into a smaller areas so you can easily net and tub (bowl).



- Never lift the Koi over the lip of the tub (bowl).
- Use a helper, or use the edge of the net to tip the net (bowl), so the Koi enter it under water

New Badges Are Available Again!

Made of the same plastic material as the original, with a magnetic "pin" on the back. Everything is printed on the badge, resulting in a clean, modern updated look. Price: **\$12**



When **Scott Zehm** was asked to choose a timely topic that was ‘near and dear’ to his heart, he chose one that has caused many a problem in his after-retirement job: *Disaster Preparedness*. You see, Scott does pond maintenance, and sometimes the biggest problems could have been solved—or avoided altogether—had a pond owner anticipated the inevitable emergency.

We are responsible for the kind of toilet our koi inhabit. Our goal is to provide an excellent environment for koi, and that should include plans to prevent losses. How? By having basic backup equipment on hand. In an emergency, you can often call someone for help, but chances are slim to nil that they will have the exact replacement part you need.

There’s nothing standard about our ponds, and the equipment choices vary wildly. So let’s look at the equipment we should all have on hand, ready to switch out on a moment’s notice.

PUMP

The pump is the heart of a filtration system, but breakdowns are inevitable with their limited life expectancies. External pumps may last 8-12 years: bearings and seals go out and need to be repaired...how long does that take? Submersibles last only 3-5 years. Therefore you should have an identical pump (or close) ready to install, with plumbing attachments already connected, so that you can pull out the old and drop in the new in the shortest time. Once out, probably any Leslie’s Pool Supply can rebuild the failed pump.

AIR SOURCE

Maintaining oxygenation is also vital, from an air pump or air stones. You need to keep a rebuild kit on hand for your air pump, as they don’t last forever: the rubber diaphragms wear out. And remember replacement tubing. For example, **Audrey Rowland** maintains two identical air pumps for her pond.

An inverter is another helpful item, converting the energy from the direct current power source to the alternating current needed by home appliances.

BACKUP GENERATOR

Power outages are becoming more common, so a backup power source is important, not just for your pond but for your home, too. A stand-by automatic generator covers pumps in the pond and half of your house—the garage door opener, refrigerators and freezers, lights, maybe AC/heating. They produce consistent and stable

power that even your computer can use if you work from home. Such a generator automatically turns on within seconds of you losing power. The cost is based on the size and need; it is a significant investment, but not having one when needed is the more costly alternative.

When relying on a generator, you don’t have to run the pond continuously; you can safely run it for two hours, then off for one hour, and back on again. There should be no significant damage in the hour when it is off, but in a power outage with no backup power source, bacteria in your filtration system will start to die after four hours. If that happens before you can restore power, you’ll need to turn the pump(s) off so you can clean the filter. . . .

PLUMBING

Whether you will be doing repairs yourself or having someone else come to do it, having spare pipes in the sizes used for your system, spare check valves and fittings will be a godsend when a pipe breaks and you need to fix it ASAP.

Ed Kushner added that you should design your plumbing and filtration so you don’t have a single point of failure; i.e., have double pumps so that if one fails there’s a built-in backup. **Nick Milfeld**’s pond was designed with two low walls that are about 8-10 inches below the surface. They allow him to divide it into two ponds by draining water; after herding all his koi to one side, he can work on the other to retrofit extra bottom drains, make repairs, or do a serious cleaning with fish safely out of the way and the filtration system still functioning.

UV LIGHTS

UV lights should be changed annually as their life expectancy is 13 months, then their effectiveness drops off dramatically. Scott recommends you put it on your calendar for April or May, because you need them most starting in May or June.

CHEMICALS

Everyone should have a gallon of Amquel Plus on hand to treat for chloramines, ammonia and nitrites during water changes. Baking soda is an emergency treatment for pH crashes: 1 pound for every 1000 gallons.

There’s so much to think about, but if prepared you can turn a potential tragedy into an experience you’ll recall with a shake of the head and a prayer of gratitude. Scott told of a planned rescue that had to be aborted: there was a power failure the night before and all the koi were lost before the rescue could happen. So preventable! 🌀



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Return Service Requested

God
Bless
America

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& Pond Supply



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pond supplies.

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- Get the supplies you need
- Search for books & resources
- Watch educational videos

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