

1644 Northhampton Dr., Riverside ~ 951.780.7395

This month we will visit the *Milfelds* in Riverside, and the weather is hinting that it will favor us: You know what the weather has been this week, but Sunday is projected to be clear — with a possible high in the mid 60's! — so dress warm, bring a jacket, your chairs and something for the buffet table...maybe something for the raffle table, too.

Nick's pond is roughly 30'x15', a rebar and Gunite construction with an island in the middle and two waterfalls. One waterfall runs 24/7 as part of a filter return, while the larger falls can be turned on from the house. The pond ranges in depth from two to four feet, with two low walls dividing it into two sections that can be drained separately if the bottom drains need attention. The full system holds 12,000 gallons and includes the original 3-chamber up-flow rock-gravel-silica-sand filter above and behind the pond, which polishes water after it passes through a UV light.

By 2002, tree roots had cracked a corner of one of the chambers, so a combination of three gravity-fed vortexes and a 120watt *Aqua UV* were added by the garage. The dividing walls served to contain the koi near the deck while the larger section was drained and drilled through on the lawn-side wall; two bottom drains were added as a retro-fit, then the original filter was repaired.

Some 72 trees – pines and redwoods, gingkoes, Japanese maples, crape myrtles and liquid amber – were planted on Nick's half acre, all on drip irrigation, and every few years the yard gets a makeover with the trees laced to allow more light. A dozen of the redwoods have fallen victim to our hot, dry inland climate, but others are 60-70 feet tall! The front yard has the best sunlight, so the roses and vegetables are there.

The last year has been one of those "every few years" for Nick: he and the sons have been reworking everything in the yard, even draining 35-year-old water from the pool so the walls could be cleaned and resurfaced. Hundreds of bulbs have been planted and the early ones are in bloom. The Winter veggies are in their second planting, and somehow they found space to put in nine fruit trees!

Our program this month was just shelved—our planned speaker had to reschedule—so we will call on our experts to answer pond– related questions: think rising water temps, hungry fish, growing algae, flooded ponds.... How have the storms affected your ponds? Remember to bring chairs and food. *Handicap parking is 3 across in the driveway*; please enter through the gate to the left of the garage. *See you Sunday!*





WHAT'S GOING ON...?

Thankfully the Board has finally found a shipping container to use for storing all of the club properties, in particular the show tanks and equipment used at Koi Auctions. The monthly storage fee on our 10' x 20' storage unit in Riverside will increase on April 1, but the new container should be in place by then. The Zoetemelks' have graciously offered space on their 'back 40' for it and, in fact, it was Theo who found this container. Approved by Scott Zehm and Larry *Leverett*, it should be delivered this week; the only thing to delay it will be the ongoing storms.

We are also still searching for someone to take over the newsletter. Anyone used to working in Word can type up a page of news or announce a coming meeting and email it to all members (and mail a few). Like creative writing? Have a little while to play at the keyboard? See what you can come up with.... All that is really required is the notice of meetings, but we are also want to share the K.O.I. information for all our members and publish ads from our sponsors.

We're also looking for someone with *website experience*. Take a look at our site and, if you know how to play with it, consider volunteering to relieve our webmistress who lives in Texas....

Finally got the date for this year's Riverside Garden Tour: Saturday and Sunday, April 29-30, with set-up of the club's demonstration pond at the Riverside Elks Club on Friday the 28th. The tour loves to have at least one water feature or a pond included on their event, and they regularly look to IKS to find them, and this year the Fales' pond will be featured! Since we didn't get to see it in February, be sure to go on the tour — it's nine gardens this year!

Coming dates:

Board:	3/5 at the Milfelds'	Mtgs: 3/26 at the Milfelds'
	4/2 at the Zoetemelks'	4/23 at the Zoetemelks'
	5/7 at Brenda Aker's	5/21 at Norco HS Pond

Start thinking about taking great pictures of your favorite koi and of your pond for a future "of the Year" competition

Keep our club president, *Ed Kushner*, in prayer as he continues his battle with cancer; cards & notes would be a great encouragement.

MEMBERSHIP RENEWALS TO DATE

Members listed below have turned in their dues and renewal forms for 2023. The list will be culled in March, and there are so many names still missing!

Aguilar	Houston ~ honorary	Palacios
Aker	Howo	Pierce ~ honorary
Alexander	Hunter	Poyle
Atkiss	Hurley	Ross
Broomfield	James	Svelan ~ honorary
Coby	Kushner	Walters
Dirac	Lei	Wolf
Elkind	Leverett	Zara
Fales	MacLaren	Zehm
Frady	Mall	Zoetemelk
Hamilton	Marrin	Are YOU listed?
Hanson	McClain	Are <u>100</u> usieu:
Henry (Bonnie)	McHan	Krause, Robert (<i>new</i>)
Hille	Milfeld	22710 Eton Drive
Hoffman	Mouw	Grand Terrace 92313
-		

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Larry Leverett did some tests on rainwater to see if our recent rains could compromise his pond....

WHAT IS THE PH OF RAIN?

INTRO: *pH* is a measure of how acidic or alkaline water is. The range goes from 0 to 14, with 7 being neutral. A pH of less than 7 indicates acidity, whereas a pH greater than 7 indicates alkalinity. Note that each number represents a <u>10-fold change</u> in the acidity or alkalinity of the water, i.e., water with a pH of 5 is 10X more acidic than water with a pH of 6, while a pH of 8 is 10X more alkaline than a pH of 7.

Since pH can be affected by chemicals in the water, it's an important indicator of water that's changing chemically. The pH of water is also an important measurement of water quality, and it affects the organisms living in the water.

Let us assume *rainwater is the purest form of water*; this is what Larry found:

The pH of pure water is 7, although carbon dioxide in the atmosphere is mildly acidic, and rainwater is affected by it. According to Harvard University, CO_2 causes rain water to be naturally acidic at an average of 5.7. There are other atmospheric acids that affect rainwater, such as sulfuric acid from volcanoes and nitric acid from forest fires. There is some balancing out of these acid in rain water with natural substances in the atmos-

phere like calcium carbonate from soil dust. If the pH of rainwater drops below 5 it is called acid rain, caused or created by extreme environmental pollution. If that were to happen you had better be putting a lot of baking soda in your pond to prevent a pH crash. This is very rare, usually in times of severe pollution.

With the unusually heavy rains we have had lately, I wondered what the pH was in our area. I collected rain water in a clean container and with my two-week-old test kit I checked for pH and ammonia. There was zero ammonia. The pH was at 6.5; 7 is neutral, so a little on the acid side yet less acid (or more alkaline) than the "average" rainwater. My tap water is at a pH of 8. My pond is normally between 7.5 and 8 — which is better for the black colors on koi, but not so good for reds.

In my contacts with many professional koi keepers over the years, they usually recommend a partial water change after a rain. These people were in areas where it rained heavily, with the amounts we get here I think the large volume of pond water would not change the pH that much. But with the rains we've had, it wouldn't hurt to check just to be safe.

~Larry Leverett







Koi Organisation International

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March 2023



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Individual Membership Renewals due March 1!

Congratulations Simon Nourse – K.O.I.'s Newest CKK!

Angled Net Fittings –Buy them now! koiorganisationinternational.org/angled-netfitting

Water Testing

4 Required and Why:

1 & 2 - Ammonia and Nitrite – tells you if your filter is working

3 - KH – (a.k.a. carbonate hardness, total alkalinity) tells you if there are enough carbonates to keep the pond stable and prevent a pH crash



4 - pH - tells you if the pond is heading for a pH crash





Many pipe sizes availble. Slip or Pipe thread option. Cheap!

Get one to screw on the inside drain fitting of your show tank so small Koi are not washed out with the drain water!

If you're using any in-water pumps, a strainer will prevent debris clogging the pump inlet!

Several manufacturers to choose from.



CLUB Renewals Overdue!

- Don't lose priviledges for your members
- Priviledges cut off at end of March

koiorganisationinternational.org/member-clubs-page

TIP OF THE MONTH

How do you get more flow without buying a bigger pump?

Get rid of as many pipe fittings as you can!

- Generally, Koi ponds should use 2" diameter pipe for water flow. Smaller pipe will reduce flow.
- Fittings account for most of the slow-down in velocity of water traveling through pipes (called Head Loss).
- Instead of Tee's or Elbows to change pipe direction, replace them with PVC Schedule 40 FLEX pipe -2" flex shown in picture below.
- Glue correctly clean the pipe and fitting, coat both with primer, apply liberal coat of cement to pipe, apply cement thinly to inside of fitting, apply 2nd coat of cement to pipe. Assemble quickly, using a ¼ turning motion until pipe hits bottom of fitting. Hold 30 seconds. No water for minimum of 2 hours – test with air if possible.



Koi GROW! 2x Length = 8x Body Mass

8x Body Mass = 8x Need Oxygen
8x Body Mass = 8x More Ammonia

Water Volume Doesn't Change. Filtration Doesn't Change.



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You buy 10 Koi - would you have bought 80?

