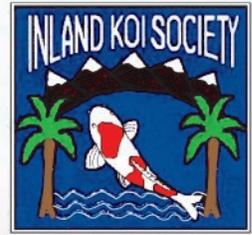


# The Inland Koi Connection

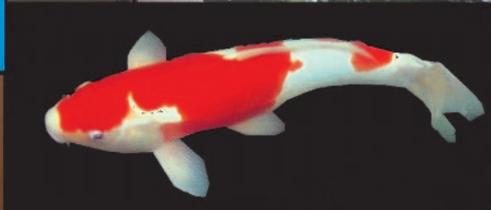
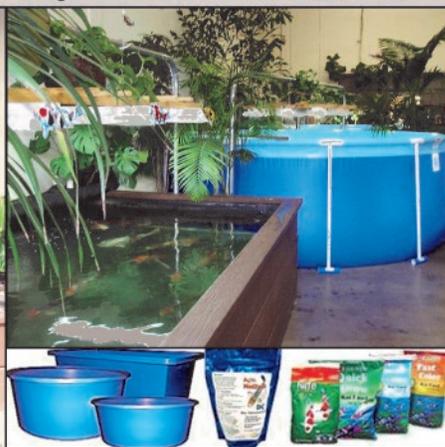


THE OFFICIAL  
NEWSLETTER  
OF IKS  
ISSUE 189  
MARCH 2012



**MARCH 25 2-5 pm**  
**INLAND KOI**  
10000 Indiana Ave., Ste #7  
Riverside, Calif 92503

**General Meeting  
& Potluck  
at the  
Business of  
Peter & Joe Cao**



Quality Japanese Koi  
& Pond Supply





Our meeting in February was held at the McClain's home with balmy weather at the start of the meeting. The backyard was shady and as the day progressed the temperature started to drop; by 4 PM it had turned into warm-jacket weather.

Rey Quirong's book report started out with an entertaining opening and had everyone belly-laughing; he then proceeded with an interesting report on the physical makeup of koi.

Nick Milfeld reported that IKS will have seven ponds on the June 3rd pond tour and will need a total of forty-two volunteers to man the ponds and provide knowledgeable IKS members to help the visitors enjoy the ponds.

Mac told us about his pond and that the koi on the big-screen TV in his home were a live-feed from a camera in the pond and not a recording. The fish looked beautiful on the screen.

Burt Ballou gave a wonderful presentation with pictures and I personally learned a great deal on how to select koi that will grow up to be show quality. We had 76 members present and I think everyone found it an interesting and educational meeting.

Mary Leever did her last raffle for the Koi Club and is retiring. I want to thank her for doing it for so many years. We need a member to step up and take over the raffle at each meeting to continue the enjoyment the raffle provides.

**Things to think about in Spring:**

- ~Vacuum sludge from pond bottom and clean out leaves, silt, etc.
- ~The pond can become more disease-prone as it physically warms up.
- ~Make sure your UV clarifier is clean and able to transmit the UV light completely.
- ~Be careful with Koi foods: adjust quality and quantity according to the water temperature.

I am looking forward to this month's meeting at **Inland Koi** in Riverside and look forward to seeing you there.

*Dennis Lynaugh*  
**Dennis Lynaugh - IKS President**

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It has only been a few weeks since Inland Koi got 3,000 new Koi from Japan. Quarantining was taking place while Larry and I were there. The koi fill five tanks and are beautiful.

You will feel the Luck o' the Irish when you look at this beautiful rainbow selection of koi! New arrivals start at \$45.

There is a special on the older inventory starting at \$25 (plus, if you buy five, you'll get one free).

Come meet the owner, **Joe Cao**, at Inland Koi this month during our March General Meeting. His older brother, **Peter**, says, "Joe always had so many hobbies—turtles, reptiles, plants, birds, spiders, comic books and cards—but mostly fish." Of all the hobbies, fish continued to be his biggest love and Joe started the business at his Riverside home in 2002. He was inspired by a friend who had fish in a tank, and Joe built one just like it. He feels a close connection to koi because he can pet and teach them. He says each koi has its own personality and you soon find out which traits develop. One of the favorite places Joe and brother Peter buy koi is in the city of Niigata, Japan, and they travel there so they can personally choose which koi to bring home.

The Cao family, father, mother and four boys, came from Vietnam, arriving in the U.S. around 1985. They settled in Amarillo, Texas, first, but a year later moved here to Riverside and settled in an uncle's house. All six in the family jubilantly celebrated receiving their United States citizenship in 1989.

All four brothers went to school here and graduated with honors. They've each branched out a little, with Peter now living in Orange County, lovingly married to Van; they have 8½-year-old twin boys. Peter suffered in the economy two years ago by being laid off work. He has a degree in Computer Science, but work is scarce so he has lined up with Joe's interest in koi and is helping full-time at Inland Koi.

Their father and mother live with Joe and take care of the plants, cooking and housekeeping. They keep an eye on this two quarantine tanks and are maintaining the 10,000-gallon pond—originally a swimming pool—that Joe still uses to grow his koi out more.

Joe is still single, available, and the youngest of the four Cao boys. He follows his love of fish and the sound of moving water because it relaxes him. Joe still has plans of going to school to try to finish his AA degree, but life is so busy now. No matter how cramped or stressful his time is, however, he never gives up on what interests him.

In June 2009 the City of Riverside gave Inland Koi one month to move out of the residential area, so they had been under a lot of stress. But to shop here, the customers would never know it. Joe and Peter are very professional, courteous, and have great customer (and friend) skills.

The business is located in a 2,500-sq.ft. building with an office, a lobby, and a shop. Joe moved all the tanks he had at the house into the shop along with two new 3,400-gallon pools (the largest ponds) and some 400-gallon show tanks (smallest ponds). These tanks run 24/7, primarily with Sequence Pumps and Wave Pumps. One of the problems with their move was having to change to an inside environment. Without sun, koi lose the brilliant colors. Their fish began to fade, so Joe and Peter installed daylight florescent lamps over the tanks to simulate sunlight. They've also incorporated a lot of beautiful, natural plants and greenery around the shop.

Inland Koi added teak outdoor furniture to their inventory, along with koi food and health products, and a small amount of pond equipment. They are very experienced in koi health, so if you have questions, they will help in any way they can!

They will be offering a 25% discount on all fish sold to IKS members "during this meeting." A 10% discount on any supplies bought by members will also apply on this day. Joe says the best thing about being in the koi business is that he gets to work in his favorite hobby ALL the time!

There will be plenty of parking and space for our meeting. We're hoping

for - counting on - good weather as we meet in the parking area behind Inland Koi. We will have the EZ-ups in place to create some shade (or to protect us from drizzles...Let's hope not!)

Dress accordingly, bring a chair for comfort, and please bring your delicious, or simple addition to share in the potluck. Members are always encouraged to donate raffle prizes, and don't forget to get a free ticket at the registration table for each prize donated and for wearing your name badge. I'll see you there!  
~Debby Leverett, IKS Newsletter Editor

**PROGRAM:**

IKS is honored to have **Jack Chapman**, Librarian and Koi Health Advisor for the Koi Club of San Diego, as our guest speaker. He will be teaching us about Water Quality and Spring Start-up. We've enjoyed his honesty, wit and humor in the past and this time he will discuss the things that will or are happening to your pond during spring - the most dangerous time for koi in a pond - and they are all based on temperature and, most important, on water quality.

Jack got interested in koi while stationed at the Naval Hospital in Yokosuka, Japan, some 22 years ago, but built his first koi pond (12,500 gallons) after retiring 6½ years ago.

He says his favorite koi classification changes every couple years - depending on what he is trying to add to or improve in his collection or for the Japanese Friendship Garden in Balboa Park - but he never tires of just looking at all of them. He really enjoys being an active Koi Health Advisor and helping club members with their koi and pond problems.

**Come listen and take notes on the facts. You'll enjoy him, and you may save yourself some problems with Jack Chapman's talk.**

**DIRECTIONS:**

◆ Follow the 91 / Riverside Fwy toward Riverside.

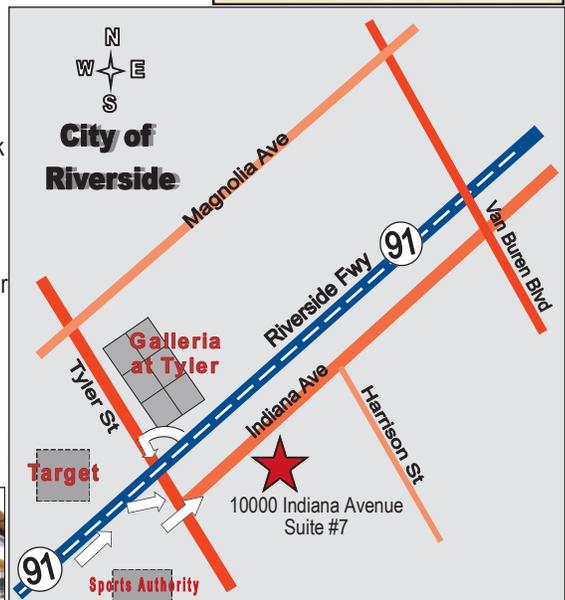
◆ Exit TYLER STREET: turn right if coming from the west, or turn left and go back under the freeway, if coming from the east.

◆ Immediately turn left on INDIANA AVE., passing the Tyler Village shops on the right. You will see Piano Gallery, Roger Dunn Golf Shop, and Smile-Care Dental Group on the left, and across the street is the 10020 Crabtree & Associates building. Turn right into that driveway.



Inland Koi is located in the building complex behind Crabtree. Park in front and come on in (Look for the koi on the windows under the stairs.)

**Inland Koi**  
10000 Indiana Ave., Ste #7  
Riverside, CA  
(951)352-5128



TO THE BACK...

**Online Lab**

Water Quality Testing

The Microscope

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Introduction

KOI Training

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you're not doin' it right!**

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Koi Organisation International is now offering a brand-new online Lab course. We have used current technology to produce an innovative way to cover subjects that are usually best taught in person. This very interesting course includes a DVD of hands-on demonstrations and supplemental written information. Course instructors are available to answer your questions and respond to your comments.

**FEATURES**

**Part 1**

- Online course, self-paced
- Lab Kit (cool goodies!)
- DVD - topics covered:
  - Fish handling, anesthesia, examination and treatment;
  - Microscope work including sample prep and evaluation; and
  - Water quality - stock solution prep & testing your test kits

**Part 2**

- Live online course
- Learn proven methodology to evaluate and solve Koi and pond problems

**BENEFITS**

**Part 1**

- Learn from home
- Work at your own pace

**Part 2**

- Interact in real-time with instructors and other students

**ADVANTAGES**

- Save time - learn from home largely at your convenience
- Save money - no expensive travel required
- Revisit/review material - the DVD, Lab Kit and the supplemental info are yours to keep

Info at: [www.KoiOrganisationInternational.org](http://www.KoiOrganisationInternational.org)

I thought I'd tell you about Koi Organisation International's newest course in hopes that you'd think it's appropriate to include info about it in the IKS newsletter. It's an online Koi lab that can be completed largely at the convenience of the student and w/o expensive travel to a distant location. I've attached a flyer about the new course. (Enrolling students get a lab kit of "cool goodies" ;-).)

Much like IKS, the folks at K.O.I. have a unwavering commitment to FUN. We know that the main reason anyone spends their time, money and effort on any hobby is primarily for enjoyment and we are committed to aiding that pursuit.

Please let me know if there's anything else I can provide in the way of info or answering questions regarding K.O.I. or any of its activities.

All the best,  
**Spike Cover**

P.S. Patricia Hurley has just signed up for our full Certified Koi Keepers curriculum. Yea!

Attendance is always up when we stay closer to home in the Riverside area, yet our out-of-town members seem to show up faithfully no matter where we go! This month we had 76 seated almost in theater fashion on the McClain's patio, facing into the "L" of the house and an easel-held flip-chart. Perhaps it is the prospect of another great speaker that brings them out.

Thanks to the McClains for hosting the meeting were proffered when all had settled in after lunch, and visitors were welcomed, including **Randy & Pauline McGarvey**, guests of Mac and soon-to-be members. They liked us! And thanks went to **Kelly McClain** for leading a number of members on a tour of the property and a visit to all their animals.

Taking a mike in hand, **Gene Maingot** shared the sad news that he and **Cecilia** are closing their pond and moving to Phoenix. Great for him, he'll be closer to his grandchildren and his new job (a practical move!), but we'll be short two beloved members. It is what it is; he has already sold or given away 30 koi and has 10 left, 28" and bigger. He put up for auction a microscope and supplies (18mm, 40-10-4x), a temperature gauge, an 18-20' long cork rope, a salt meter, and a large framed koi print, then donated the proceeds to the club. He also offered a 5500-gallon koi pond and three fish, with a lovely house to go with them; sadly, no takers...

Requesting volunteers to sign up, Pond Tour Chairman **Nick Milfeld** talked about this year's tour, which will be in Redlands. Seven ponds have been confirmed for a very 'tight' tour—about 10 miles from end to end. A new club T-shirt goes to each volunteer, with a new design by **Sandy Hanson**. If you missed the meeting, give Nick a call to sign up! Just want the shirt? Give Sandy a call to order one; prices will be announced soon.

Inspiration can be so compelling, and Librarian **Rey Quirong** was compelled to preface his report by sharing his experience in his first year with the club. It was comedy central as he praised the work and characters of **Debby, Nick, Jack, Gene, Mac**, the **Malls** ("Jerry, the lighthouse in the middle of the storm" at the November meeting!)... Rey's enthusiasm for IKS has been unbridled; we've threatened not to mention any need in his presence lest he volunteer for something more! We thought he was training as a public speaker; now as a comic!

But on to the "book report." Rey has redefined the term and broadened not only his own knowledge but ours, too, as he shares in depth what he has learned from books in our Library. For today he prepared an excellent exercise for us with a three-page set of diagrams of external and internal koi anatomy and the respiratory system, and made copies for all. As they were distributed, he encouraged us to "fill in the blanks" as he named and discussed the purpose and functions of all the external and internal organs, then detailed the respiratory process. You learn so much more when you engage not only the auditory, but visual and tactile senses, too. If I'm not mistaken, Rey ran through all of this without notes...again! He's talking koi like a pro, soaking up the info like a sponge, and we get to learn with him! Refer to page 8 to see his Internal Koi Anatomy page.

Unaware of it in his planning, Rey set us up for our featured speaker, **Burt Ballou**, a well-known and respected koi judge. Burt took a Japanese calendar—the oversized type with a color photo of one huge champion koi each month taking up the whole page, and a small calendar invisibly printed somewhere by it—and mounted it on an easel, using it as a big flip chart to illustrate "**How to Select Koi**." His goal was to teach us the fine "show" qualities we should look for in a "finished" koi, and how to select a young koi with show potential. He repeatedly used terms Rey had just explained, and Rey, of course, had provided everyone with paper for note taking.

The key principle to keep in mind when shopping is:

**If you want show-quality koi, start with whole fish ~ a defect in a young koi won't correct itself.**

Burt proceeded to talk through the general "hard and fast rules" to koi selection, noting that to any rule there's an exception; there are no absolutes with koi...

- Inspect the fish and reject any with distorted, mangled or missing parts. With small fish you can't away see deformities; a turned head, crooked mouth or spine, all become more visible by 12-18".
- Check the **head**: it should be full shaped, not pointed, and have a smooth sloping top; good full cheeks indicate a potential for a bigger fish.
- Determine **gender** (several tests)
  - **Fins**: female has fuller, rounded fins that tend to be clearer or more transparent; male has straighter or pointy fins that finish earlier and are opaque.
  - **Gill plates**: female are smooth, male gill plates are rough.
  - **Ovipositor**: sexes appear similar when not in breeding condition, so carefully turn fish over to see anal vents; female has an oval "outie" while male looks like a T- or Δ-shaped "innie."

Examining **color** is the next step.
 

- **Red** is always stronger at front end of fish; therefore look for good red at the back end. Nice even red on a small fish doesn't guarantee a fine finish, but do look for clean sharp borders.
- **Black** is always stronger at back end, weaker in front, so look for strong black at front of koi: what you buy today you'll have for 30 years!
- **Pink** is not under-lying red that will rise later; it's junk.
- **Color** is weak, thin in young koi; it will only deepen, intensify and get thicker with age.
- The **triangle on the head** is the brain; the scalp hasn't thickened yet.
- **White** is the strongest color; red finishes first; black is always last.
- Simple advice when selecting for color is: "**Buy the Red and Bet on the Black.**"

**S**cales and patterns mystify many, but Burt simplified that, too.
 

- The **number of scales** will not change, but they will enlarge from the size of a pinhead to a quarter or half-dollar size.
- Patterns may look great on a small fish, but they can change dramatically as the fish matures. The red on a Kohaku should wrap below the lateral line on a small fish to allow for growth, so look for an oversized pattern. An exception, the Asagi orange (on the belly) does continue to spread upwards to wrap around the koi.
- A 6" Showa or Sanke has a slim chance of showing any good black; the white won't be clear because of black underneath that looks like grey or dull bluish patches. It takes up to six years for the black to fully show itself.
- The 6" is the less expensive risk—it's raw material; the high price for a larger koi pays for finishing.
- Smudges on the head never go away.

**O**f course, all the above is but a good beginning for koi shopping. Burt gave some more cautious tips.
 

- Showa: look at pelvic fins; they are notoriously twisted, and their heads turned.
- Metallics: look at pectoral fins; the lead rays are notorious for having a kink halfway out.
- Yamabuki Ogon: look at the mouth from below; they are often deformed.
- Skin quality is tricky and hard to explain, but should be silky, shiny or lustrous, like porcelain, not flat or matte.

**K**oi change over time, they pass through stages as we do. They may not look like much before two years, and it is hard to accept that breeders will get rid of most by that second year: A spawn that produces say 200,000 fry, will be culled to 2,000, then to 200; eventually there may be five to ten the breeder will select. Experience gives confidence to cull that severely. Age then brings fading colors, changing patterns.... A Grand Champion, five to ten years later, may not be recognizable! And your prized beauty you pack off to a show may disappoint on arrival by being so stressed it camouflages itself!

**O**verload!! My head was swimming with details! Burt was fascinating and willing to interrupt himself to answer questions throughout his talk. Mac thanked Burt profusely for all of us and presented him with an IKS sweatshirt (it was getting chilly by then) and a \$25 gas card in appreciation for his time. We'll see how much we all remember when we visit Inland Koi in March!

**I**n the lingering minutes of the day, Mac helped **Mary Leever** with the raffle, and thanked her for the many years she has shopped for and set up the raffles. We look forward to seeing her at meetings with nothing to carry but a birthday cake for the celebrants of the month, her signature addition to table.

*Respectfully submitted,  
~Peggy Milfeld, Secretary*

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ROBERT & YVONNE KOUNANG	REDLANDS	01 - 12
AUDREY ROWLAND	RIVERSIDE	01 - 12

**IKS HOPES YOU ENJOY A FUN AND INFORMATIVE ASSOCIATION WITH OUR CLUB! FOR EXTRA HELP, QUESTIONS, OR INFORMATION, BE SURE TO REFER TO THE 'HELP LINE' ON PAGE TWO.**



## WHY SOME FISH FART

By Kristina Chew  
 Care2Causes / Oct. 2011

Fish (some types of herring, to be specific) fart. Furthermore, the herring use flatulence to communicate, to alert other fish and form

“protective shoals” at night.

Yes, one species’ anti-social behavior is quite the opposite for another.

Marine biologists have found that some types of herring, using air gulped from the surface and stored in their swim bladders, create high-frequency sound bursts (up to 22 kilohertz) by expelling air through their anuses. From video, Robert Batty, senior research scientist at the Scottish Association for Marine Science in Oban, says that he and other scientists could actually see bubbles emanating from the fishes’ anal ducts. The sound produced was “very much like someone blowing a high-pitched raspberry.” The noises seem to have the purpose of communication because the fish fart in darkness and when there is high fish density — that is, at times when they have a need for alerting each other.

While other marine fish do use sounds (some cod make their swim bladder vibrate to produce a kind of drumming sound), so far it’s only some herring species that seem to use the art of the fart to communicate. Ben Wilson, a marine biologist at the Bamfield Marine Science Centre, British Columbia, Canada, and his colleagues have given the phenomenon its own special name, Fast Repetitive Tick — or FRT, to use the acronym.

Even more, scientists have been airing concerns about the possible impact of noise pollution on the herrings’ form of communication. Engine noise from ships or seismic guns used for oil surveys could interfere not only with the herring’s hearing, but also with that of those who feed on them, dolphins and whales. These animals rely on hearing farts — that is, FRTs — to find their food. Some fishy things mean more than words can say.

Read more: <http://www.care2.com/causes/fish-fart.html#ixzz1o1BpGsWL>

\*Note from IKS Editor: Have you ever seen bubbles come up from your koi? I can't imagine being the scientist to discover this, and trying to convince his/her colleagues that these fish were farting! It was probably a humorous conversation! :-)

**Are Copper Ionization Purifiers Safe for the Pond and the Koi?**

When Orville Hanson talked about filtration at the January meeting, I got lost about halfway through. I didn't know there were so many different ways to filter a pond! Most I had read of or heard of in passing, but one was totally new to me: the ionizer.

Since then I have run across several articles about ionizers, so I decided to do some amateur research to satisfy my own curiosity. This is what I have gleaned from my reading.

Electric ionizer purifiers are often considered for use as non-chemical alternatives to chlorine in swimming pools. The chlorine may irritate eyes, dry the skin, and bleach out swimwear; it smells and is costly; money for chemicals and maintenance could be saved. Chlorine also slowly attacks filters and equipment, and pool liners when used; and unhealthy new chemicals may form when chlorine reacts with certain impurities. Is the ionizer an appropriate investment? Will it raise the electric bill?

The ionizer is touted as an excellent tool for pool water treatment and the electrical cost is negligible, akin to using a 20-watt night light. Some models are solar-powered, operating for free with no wiring or plumbing to hook up. But they don't totally eliminate the chemicals: the pool still should get a periodic shock treatment with chlorine to oxidize body oils, suntan lotion, etc.

Ionization purifiers are very simple water purifying devices, and the concept of using metal ions, copper and silver, has been around for centuries. As far back as the Roman Empire, water was stored in silver containers and served in silver cups because just a very low level of silver ions killed many microorganisms. NASA perfected the method in the 1960's to purify water on spacecraft.

In the device, water passes over one or two electrodes made mainly of copper and a slight amount of silver and other minerals. Safe low-voltage electric current causes copper and silver ions to be released from the electrodes into the water.

Copper ions do the brunt of the work to kill algae and some bacteria and viruses; silver ions are also a strong bactericide. The concentration levels of copper and silver ions is very low—less than one-quarter as much as allowed in drinking water—so they are not harmful to people or animals. You still must control the acidity of the water with standard pH-balancing chemicals. Some units will include an additional platinum alloy electrode for oxidizing, others add an ozone generator, some have electronic controls to maintain proper ion concentration levels, and some have a digital readout and a pH sensor/readout.

Jump now from pool to pond. . . In the pond-owners' ongoing war against algae, copper ionization is a relatively new weapon, but it has raised serious questions of safety for fish and plants, and it appears to be a split decision among the experts. Of course, there's no long-term track record with the application; ionizers have been used in the pond industry for only five to seven years.

There have been varied reactions to ionization applications. Some water garden professionals report no problems with fish or plants over several years; they get complete algae control and often no copper read-

ing at all because the level stayed so low. Recommended copper levels fall between .01-1 copper parts per million. Those reports come out of Pennsylvania, Ohio and Illinois.

In New Mexico and California, there were reports of unsuccessful

**“There are basic scientific facts we can't change. Small particles of heavy metals, particularly with copper, create issues with mortality and aquatic life. All aquatic life is affected by relatively low doses.”**

**~Rick Bartel, Tennessee designer, consultant, educator**

tests. In one, after four weeks the water was green and the fish were evidently ill, clamping, hanging at the water surface, isolating themselves. The only reasons they could find was copper levels in the water; after a 50% water change, the fish returned to normal within 48 hours. “When fish recover after a water change, that usually means something toxic has been in the water.” With the addition of a UV clarifier, the pea soup disappeared in seven days. In another case, an ionizer in a turtle pond killed the turtles.

Some professionals are still undecided, but their primary concern with ionizers is litigation and the phone call a pond contractor dreads: “My fish are floating in the water!” If prize koi die, they doubt the manufacturers will take the hit; the middleman will. Of course, many of the ionizers are DIY kits promoted as simple-to-do and all-inclusive, with everything one needs to attach the unit to an existing system; if it kills your fish, you are the middleman.

Other contractors only use ionizer in non-life-supporting features. That would cover the pools and spas, and also fountains and such. They would even refrain from using the treatment in water gardens, believing any copper levels are dangerous. Besides the obvious life in a water garden, the features attracts other life such as birds, dragonflies, and other critters.

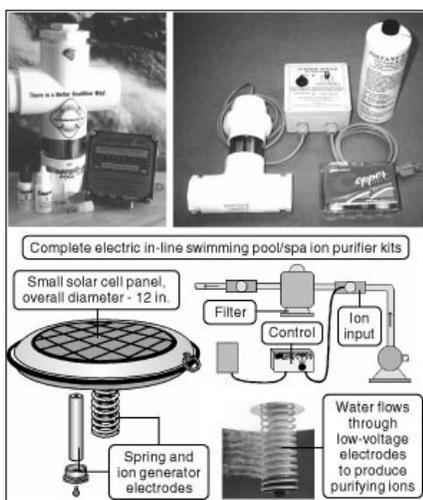
Heavy metals are a bioaccumulate—the effects add up. Over a long period of time, they can cause damage to an organism's liver. There have been studies with koi, which have a higher tolerance for copper toxicity than other fish, but they haven't been tested for long-term effects.

According to the EPA, “Copper is highly toxic in aquatic environments and has effects in fish, invertebrates, and amphibians. . .” A four-year (2006-2009) ionization study done in Canada housed unspecified species of fish in man-made ponds and kept copper levels at .3ppm; the results indicated ionizers are best in pond-free (*i.e.*, fish-free) systems.

With fish, monitoring must be done weekly. Even so, long-term exposure is not recommended. Maintenance is critical and the bottom line is that the ionizer is not a unit you can set and forget. Copper may be safe at up to .3ppm, but if left uncontrolled it can climb past that. That it comes with a copper test kit should be a red flag; the necessary monitoring may be too much for an average pond owner. Other variables in the water, such as pH, hardness, alkalinity, temperature. . . all affect the ionization process. Heavy metals are most toxic in low alkalinity and pH, which allows for higher concentrations to remain dissolved.

Choose wisely: who will monitor levels and what aquatic life are you putting on the line?

Resources: “Electric ionizer a safe alternative to chlorine,” *Press-Enterprise*, 17 June 2000: D-3 ~ “Solar or electric ionizer purifies pool and spa water with less chemicals,” <http://www.dulley.com/swim.shtml> ~ “Copper Ionization Pros Weigh In,” *Water Garden News*, Mar/Apr 2012: 1,24.



**Any device that has to be measured and monitored so closely is not good for the average hobbyist.**

# INLAND KOI

Quality Japanese Koi  
& Pond Supply



Importers of high quality  
Japanese koi.  
Complete line of koi &  
pond supplies.

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of Japanese Koi  
is looking good.

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(951) 352-5128

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Sun 10:00-4:00



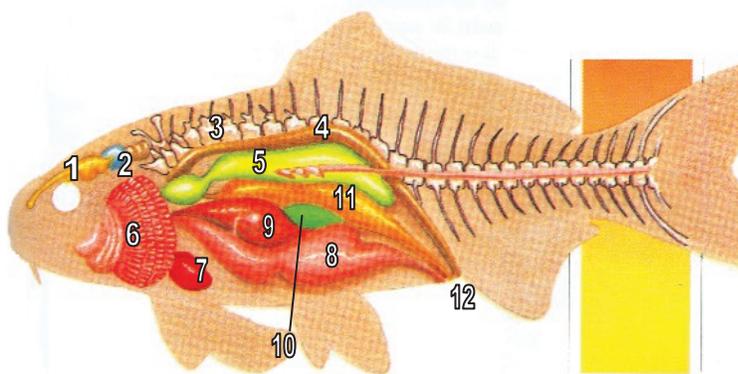
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THE BEST QUALITY  
**Japanese Koi**  
AT A REASONABLE PRICE!

## Internal Anatomy of a Koi

From Rey Quirong



- |                 |                     |                |
|-----------------|---------------------|----------------|
| 1 - brain       | 5 - swim bladder    | 9 - liver      |
| 2 - ear (inner) | 6 - gills           | 10 - spleen    |
| 3 - backbone    | 7 - heart           | 11 - gonads    |
| 4 - kidney      | 8 - intestine (gut) | 12 - vents (3) |

- 1 - brain sends hormones to the body
- 2 - internal ear, but no real hearing
- 3 - backbone or spine
- 4 - kidney maintains osmotic balance, excretes excess salts
- 5 - swim bladder signals to backbone & inner ear to maintain depth without struggle
- 6 - gills, 4 each side, for air exchange; inside the membranes are capillaries
- 7 - heart, 3-chambered, pumps oxygenated blood to gills
- 8 - intestine enzymes break down food
- 9 - liver stores food and waste.
- 10 - spleen holds immature blood; makes immune system
- 11 - gonads determine gender (ovaries or testes); eject through anal fin vent
- 12 - vents: urine from kidneys; waste from liver; sexual excretions from gonads



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**HINT...**

Renewal forms were sent along with the November Inland Koi Connection (IKS Newsletter) in 2011. If you misplaced your copy and would still like to be a member, print a copy from website [www.inlandkoi.org](http://www.inlandkoi.org) and mail that along with your check to our Treasurer, Sandy Hanson, at 5198 Arlington Ave. #146, Riverside, CA 92504. Or, renew at the IKS General Meeting this month.



**LAGUNA KOI PONDS**

**Ben Polonski**

Phone (949) 494-5107  
 20452 Laguna Canyon Road, Laguna Beach, CA 92651  
[bplonski@lagunakoi.com](mailto:bplonski@lagunakoi.com) Fax (909) 494-1679

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This is your **last** Inland Koi Connection if you did not renew your membership yet. This newsletter is part of your membership to the Inland Koi Society. If you choose to leave us, we will definitely miss your input, your company, your interest in koi, ponds, and companionship. Don't forget us; we are always around if you change your mind or need IKS again!

**F.Y.I. = For Your Information**

If you have any pond, koi, or Microbe-Lift-related questions, feel free to ask! Meanwhile, check out my book, [www.ABC-Ponds-book.com](http://www.ABC-Ponds-book.com). The book is for anyone who has a pond or may want to build (or upgrade) one. It should be 'required reading' for anyone planning a pond. Are you concerned about predators or algae problems? This is the book that tells you what you need to know.

Sincerely,  
 Carolyn Weis  
 Ecological Laboratories

[carolynw@microbelift.com](mailto:carolynw@microbelift.com) / [www.microbelift.com](http://www.microbelift.com)

**Advertising in the Inland Koi Connection includes color & your Ad on our [inlandkoi.org](http://inlandkoi.org) website**

<b>BUSINESS CARD</b>	<b>\$100 / year</b>
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<b>FULL-PAGE DISPLAY</b>	<b>\$550 / year</b>

Approximately 135 copies of the Inland Koi Connection are printed and mailed ELEVEN times yearly. For more information call Debby, IKS Editor, at (951) 781-3887

**HERE IS THE NEWEST:**

**\*Warren & Cynthia Fowler** have a daughter who will be getting married in the spring, so they are traveling to Monterey soon. In the meantime, they have just moved from Corona to Riverside. *Here's hoping happiness follows you around!*

**\*Gene & Cecilia Maingot** are relocating closer to their children in Arizona. A home has been bought, Gene has a new job there, and their home in Corona is up for sale. They've given most of their koi away and have donated a number of items to be auctioned off for the club's benefit. In February, Patricia Hurley won a microscope for \$60 and a large koi picture (approximately 4' x 3½') for \$35. Larry Leverett bid \$50 to win a floating 18' cork rope which settles the water movement under the waterfall. Nick Milfeld bid \$10 and got a temperature gauge. Debby Leverett won a salt meter for \$25. *Such bargains! But what a loss! We will really miss you Maingots, but wish you wealth, health, and happiness in all you do.*

**\*Did you see what Phil & Rachel Hunter** did with the Quarry fight in their Temecula area? The opposing group, City of Riverside, and developers had to move the meeting to the Riverside Convention Center to fit everyone in. This has been a long and ongoing fight, but they WON! No Quarry will be allowed. *We cheer you for your perseverance.*

**\*Well wishes go out to Ed Kushner.** He fell off a ladder and broke two vertebrae. *Ouch! Heal quickly and come back soon.*

**\*Alan Pollock** volunteered to host our March General Meeting at his home in the desert in La Quinta. He was really looking forward to the meeting as he had debated whether or not to do November's

Thanksgiving meeting. He had the room, but decided he wanted to spruce things up a little and build more, so he decided to wait until the spring to host; hence the March date. But mid January there were hurricane-force winds. His carefully landscaped yard, pond and trees were flipped, thrown, uprooted; he lost a 40-year-old tree; the house survived but without a roof, and no one was hurt. *Thank goodness! We'll plan again, but it may be a while. Chin up, Alan!*

**\*Our 2012 Pond Tour Chairman, Nick Milfeld,** has signed up seven homes for the tour and it's only about a 10-mile trip end-to-end. Be sure to save the date, Sunday, June 3, in Redlands. *Way to go, Nick and, of course, our volunteering home owners!*

**\*Theo Zoetemelk** is one of those quiet behind-the-scenes members who has volunteered to bring plates and plastic ware to every meeting for a good 11 years! He somehow got Norco City Council's approval to build a four-story windmill in his front yard. He is from the Netherlands originally, and when he first presented his idea to construct the traditional Dutch fixture on his property in Norco—"Horsetown USA"—to the City Planning Commission, he got a 4-1 vote of rejection. He went to the Norco City Council to appeal the decision, handed out windmill shaped butter cookies, and brought his granddaughter to help. Somehow they convinced the council members that a giant latticed windmill, propped atop a hill, would enhance Norco's rural equestrian atmosphere and co-exist compatibly with horses, something building officials were concerned about. Theo said, "Jeanne called me crazy and said I'd never get a permit to build it. Of course, she forgets that I'm a Dutchman and I don't give up easily." Jeanne always wanted a windmill and he told her when she retired, he would build her one. *Can't wait to see it! :-)*

It is  
Time...

TAKE  
PHOTOGRAPHS  
OF YOUR BEST KOI &  
BRING TO THE APRIL MEETING.

HONOR SOMEONE WITH THE  
TITLE 'KOI PERSON  
OF THE YEAR.'

...Time  
to Choose

Each year, members submit up to 3 pictures of their best koi for the club's vote. The winning 'Koi of the Year' photo is sent to AKCA for voting at the Annual Meeting for the 'AKCA Koi of the Year.'

Also, think of a superior and helpful member you have noticed in the club and nominate him or her for 'IKS Koi Person of the Year.'



**FOR SALE:**

5400-Gallon Low-Maintenance KOI POND

**INCLUDES:**

Filtration, 3 Koi, and a House in Corona.

<http://www.mrmlsmatrix.com/DE.asp?ID=14172938783>

**St. Patrick's Day quotes and Irish sayings**

- ♣ *Never iron a four-leaf clover, because you don't want to press your luck.*  
—Unknown
- ♣ *A best friend is like a four leaf clover: hard to find and lucky to have.*  
—Unknown
- ♣ *May your home always be too small to hold your friends.* —Irish toast
- ♣ *In Heaven there is no beer; that's why we drink it here!* —Irish saying
- ♣ *May your glass be ever full. May the roof over your head be always strong. And may you be in heaven half an hour before the devil knows you're dead.*  
—Irish prayer

**Koi Members:**

We are looking for another volunteer! We **really need** someone to coordinate the raffles at our monthly meetings. The IKS Board provides a monthly budget to purchase items for the raffle, and someone is selected to call out the raffle numbers.

The primary responsibility of the coordinator is to purchase the raffle items, bring them to the meetings, and set them up on the table. If anyone is interested in taking on this task, please contact me ASAP. The raffle helps defray monthly costs and is truly one of the highlights of every meeting, but it won't happen without a coordinator. ~ Mac Phone: (909) 225-2346 or Email [jmksmclain@gmail.com](mailto:jmksmclain@gmail.com).

**INLAND KOI SOCIETY  
MONTHLY PLANNING CALENDAR 2012**

REGULAR MTG 4th Sunday	HOSTS & City	PROPOSED PROGRAM Speakers	BOARD Wed. after Mtg
March 25	Inland Koi - Riverside Dealer	Jack Chapman - Water quality and spring start up	Mar. 28
April 22	Larry and Debby Leverett - Riverside	Galen Hanson - Disease	April 25
May	No General Meeting	Pond Tour on June 3	May 30
June 24	Steve and Laura Nyirady - Yucaipa	Mark Whalen - Pond pips (Improving Quality of Pond and Fish)	June 27
July 22	Miguel Sierra - Murrieta	Shawn McHenry, Mystic Koi - Topic to be determined	July 25
August 26	Pam Spindola - Santa Ana	Pam Spindola - Slide show	August 29
September 23	Patricia Hurley - Cherry Valley	Spike Cover - Topic to be determined	Sept. 26
October	Bus Trip	Destination - Pending	Pending
November 18	Jerry and Pat Mall - Temecula	Pending	Nov. 28

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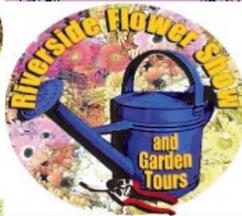
**Coming Events**

17-18	<b>ZNA So CAL KOI SHOW</b> ~ Gardena Civic Center Complex / 1700 West 162nd St., Gardena 90247 / 9am-5pm, Sat. / 9am-3pm, Sun. / No charge / <a href="http://znasocal.org">http://znasocal.org</a> / (818) 207-3238
24-25	<b>CHERRY BLOSSOM FESTIVAL</b> ~ Descanso Gardens / 11am-3pm / 1418 Descanso Drive, La-Cañada Flintridge 91011 / (818) 949-4200 <a href="http://www.descansogardens.org">www.descansogardens.org</a>
25	<b>INLAND KOI SOCIETY MEETING &amp; POTLUCK</b> ~ 2:00-5:00pm at <b>Inland Koi</b> in Riverside / For more information call (951) 398-7048.
28	<b>IKS BUSINESS MEETING</b> ~ 7 pm / <i>All members of IKS welcome!</i> — 6531 Box Springs Blvd, Riverside / Dennis Lynaugh (951) 780-0123
31 APR.1	<b>HEMENWAY HOME GARDEN TOUR</b> ~9am-4pm 5890 Grinnell Dr, Riverside, CA, 92509 (951) 360-8802 / Free / Demo gardens on how to build and install an extreme drought tolerant garden
31- APR.1	<b>MARINE AQUARIUM EXPO</b> ~ 10am-5pm / Orange County Fairgrounds and Expo Center / 88 Fair Drive, Costa Mesa 92626 / (714) 708-3247 <a href="http://www.marineaquariumexpo.com">www.marineaquariumexpo.com</a>

2012 ~ 65th Annual Riverside Community  
**FLOWER SHOW/GARDEN TOUR**



*Symphony of Spring*  
**Saturday, April 14**  
Gardens 10 am - 4 pm • Show 1 - 6 pm  
**Sunday, April 15**  
Gardens and Show 10 am - 4 pm  
**Flower Show at the Elks Lodge**  
6166 Brockton Ave. Riverside  
**plus 6 Private Gardens**  
**\$8 Pre-sale or \$10 Donation at the door**  
Children under 16 Free with paying adult  
Maps available at the Elks Lodge 9 am Saturday  
**Submit an entry to our flower show for FREE!**  
Lots of fun categories for adults and kids-  
See our website below for details and ideas!



**Pre-sale Tickets available:**  
Gene Brown Real Estate  
8990 Limonita • Jurupa  
951-685-3242  
Parkview Nursery  
3841 Jackson St. • Riverside  
951-351-6900  
4377 Chicago Ave. • Riverside  
951-784-6777  
Back Street Restaurant  
3735 Nelson St. • Riverside  
951-683-6650  
Mrs. Tiggy Winkles  
3675 Main St. • Riverside  
951-683-0221  
Steve's Valley Nursery  
23125 Sunnymead Blvd.  
Moreno Valley  
951-242-8080  
Dragonmarsh  
3643 University • Riverside  
951-276-1116  
Louie's Nursery  
16310 Porter Ave. • Woodcrest  
(at Van Buren)  
951-780-7841  
Sell it Again Sam's  
10031 Indiana Ave. • Riverside  
951-352-2800



FOR MORE INFO GO TO: [www.RiversideFlowerShow.info](http://www.RiversideFlowerShow.info) OR CALL 951-777-0746

**Saturday April 21- Sunday 22, 2012** / 100th annual Flower Show and Garden Tour  
Redlands Horticultural & Improvement Society. "Celebrating 100 Years!" Garden  
Tour and Uncommon Plant Sale / ESRI Campus, 380 New York Street, Redlands.  
*The home of Jack & Norma Marrin, members of IKS, will be included on the Garden Tour.* You don't want to miss THIS one! (909) 793- 1016

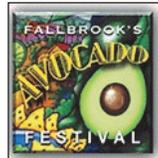


**April 20 - 22, 2012**

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Expo ~ Everything  
you need to know  
for a happier, healthier pet  
OC Fair and Event Center, 88 Fair  
Drive, Costa Mesa, CA US 92626  
<http://petexpococ.org/>

**Fallbrook Avocado Festival**  
**Sunday, April 15,**

9:00 am- 5:00 pm  
[www.kennedyfares.com](http://www.kennedyfares.com)  
Come help us make this year's  
event as exciting as always!



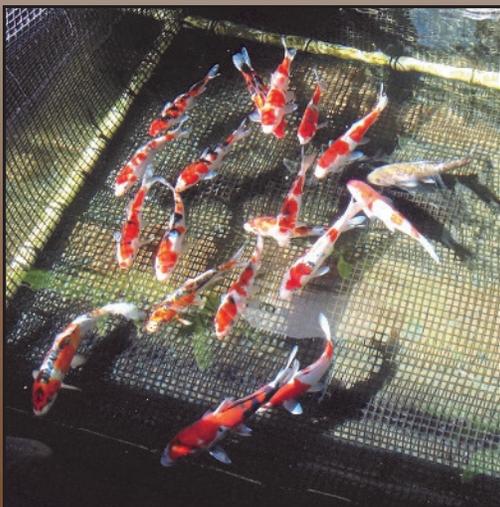
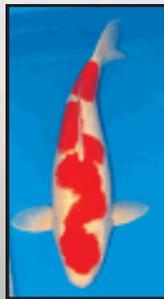
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08	<b>EASTER</b> says you can put truth in a grave, but it won't stay there. ~Clarence W. Hall
11	<b>IKS POND TOUR COMMITTEE MEETING</b> ~ 7 pm / Milfeld's home. 1644 Northhampton Drive, Riverside, 92506 / (951) 780-7395
13	<b>AKCA BOARD MEETING</b> ~ 6pm / 529 W. Blue-ridge Ave., Orange 92865 / Call Mac at (951) 398-7048 for more information.
14 - 15	<b>RIVERSIDE FLOWER SHOW / GARDEN TOUR</b> ~ \$10 / Elks Lodge, 6166 Brockton Ave, River- side/ (951) 777-0746 / <i>IKS will feature a koi pond in the lobby as we have in the past.</i> <a href="http://www.RiversideFlowerShow.info">www.RiversideFlowerShow.info</a>
14- 15	<b>FULLERTON ARBORETUM GREEN SCENE</b> ~ 10am-4pm / 1900 Associated Rd., Fullerton, CA / \$6.00 / (657) 278-4798 / Outdoor garden event. Green Scene is the spring event to find bulbs, succulents, organic vegetables, varietal plants, garden accessories and garden products. <a href="http://fullertonarboretum.org/event_green.php">http://fullertonarboretum.org/event_green.php</a>
15	<b>FALLBROOK AVOCADO FESTIVAL</b> ~ 9am-5pm <b>For GPS</b> use Fallbrook Union High School: 2234 Stage Coach Lane, Fallbrook to get into the outer limits of Fallbrook/ Avocado and Guaca- mole contests, Arts & Crafts, & 350 Unique Booths / <a href="http://www.fallbrookchamberofcommerce.org">www.fallbrookchamberofcommerce.org</a>
20- 22	<b>LARGEST PET AND PET PRODUCT EXPO</b> ~ 10am-6pm / OC Fair and Event Center, 88 Fair Drive, Costa Mesa, CA / see info on left
21- 22	<b>100TH ANNUAL REDLANDS FLOWER SHOW AND GARDEN TOUR</b> ~ See information on the left of this page. <a href="http://www.rhis.org">www.rhis.org</a>
26	<b>INLAND KOI SOCIETY MEETING &amp; POTLUCK</b> ~ 2:00-5:00pm at Larry & Debby Leverett's house in Riverside. For more information call (951) 398- 7048 or (951) 781-3887
29	<b>IKS BUSINESS MEETING</b> ~ 7pm / <i>All members of IKS welcome!</i> — 6531 Box Springs Blvd, Riverside / Dennis Lynaugh (951) 780-0123



**INLAND KOI SOCIETY**  
**5198 ARLINGTON AVE., #146**  
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