



## PRESIDENT'S MESSAGE – *Jerry Kyle*

Since this month's meeting will be a trip to San Jose (April 29), I personally traveled there to see dealers we have visited in the past. Featured is Champion Koi. Tom Lai is one of the largest Japanese Koi importers on the west coast. His stock, primarily from Ogata/Niigata breeders is personally hand selected during his twice a year buying trips to Japan. In May he will have an annual open house for his biggest sales event of the year. We will be there first while selection is still huge. There is an impressive selection and quality worth making the trip just to see. Too many tanks to count. All sizes and prices starting low. Impressive. In addition to what is on sale Tom will give us an additional 10% discount on all Koi and most supplies for making a visit on April 29.

Another stop, Tom Tse, is easily recognizable as he is the one always with a smile on his face. Not as large a facility but with even more product crammed in. They will be moving to a new larger location after next month. The product variety is awesome. Koi is only from Japan ITO Koi Farm. Colors are unbelievable. Then there are the garden items. Statuary includes dolphins, cranes, lions, eagles, Japanese lanterns. Some were as big as me (Jerry). Even the lanterns were. It is no wonder they are moving to a larger location. They need the space. Walk down the narrow path to the back and there is even more.

A short distance away we will visit Genki Koi. Kevin Pham runs his business in his back yard and on the internet and personally selects his Koi from Japan also. Kevin works with hobbyists and looks and shops for them looking for show winners in Japan. While not as large as he first two stops, he often has Koi worth seeing and is known for working closely with customers. This is often where the really big show fish shown at competitions came from. It's not unusual for you to look in his deepest pond and view koi in the \$10K+ range for sale. If you're looking for a specific variety of koi and don't want to spend the big bucks, he will show you his tatagoi and recite the breeder pedigree for its mature potential.

The final stop is also in a back yard. Cherry Hill Koi & Water Garden is in a big back yard. I found Gary sitting pond side relaxing and watching the fish begging for food. You have to know about this place to find it. While there a neighbor came by to check it out. Neighbor had lived nearby for years and never knew until referred. It is a quiet street and there are no signs. Business is often by referral and includes Koi and water garden plants. The setting is serene and a nice place to visit and relax before heading home.

This dealer tour used to be an annual ritual for our club but as the industry grew in the Sacramento Valley we moved to tour our local businesses. We are going back to San Jose this year so the newer members of our club can appreciate the quality and beauty of hand selected imported Koi and to see the variety on such a grand scale. I would encourage everyone to consider making the trip. For a preview check out their websites. Search the business name followed by San Jose, CA.

We have designated a couple of locations for car pools, near the Galleria in Roseville and by the Denny's at I-5 and Highway 12 in Lodi. See page 4 for additional information.

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## Responsible Koi Husbandry

By Garry Chin

**ATTENTION!!** Week of April 12<sup>th</sup> not only should club members be checking their water chemistry, they should observe the behavior of their beloved Koi. Koi will be the first to tell you if they are not happy with the water or that something is bothering them.

This morning while observing my Koi, they did not appear to be their normal selves. Sensing a problem with the water possibly from the recent rains I immediately began a partial water change.

While the water was draining from my Koi Pool, I tested the water and sure enough the pH and hardness were lower than normal. Being in tuned with my Koi enabled me to determine there was a water quality issue so I could take action.

## More Responsible Koi Husbandry

By Jerry Kyle

I did not need to do a water change BUT, Garry's note did make me take stock of another item. It has been awhile since I cleaned the bottom drain line. I closed off the bottom drain line to the pre-filter and drained pre-filter. Then opened bottom line and let water rush in. I do not want to admit how much crud flushed out of that bottom line. I drained pre-filter and did the flush and drain again to be sure. That mulm down there is where ciliated protozoan parasite critters like Costia, Chilodonella, and friends winter waiting for water to warm this month so they can wreak havoc. Hope I got them in time. Hope you get them in time also. This is definitely one of those an ounce of prevention is worth a pound of cure things.

## Koi Person of the Year

Congratulations to Gus Cubillo who was unanimously voted Koi Person of the Year by Camellia Koi Club. Gus has been our faithful distributor of Koi Ahoy, the Webmaster for Camellia Koi Club, and general information distributor for our membership. Our warmest thanks Gus!





## **AKCA REPORT:**

Camellia Koi Club Report to AKCA, April 2012

The Camellia Koi Club will travel to the South San Francisco Bay Area this month to take a tour of major importers of Japanese Kio. Plans are also being completed for a private members and quests Pond Tour and Progressive Dinner to be held in May. With the future promising new ponds, annual pot luck, Koi Auction, Spaghetti Cook Off Challenge, Koi Health presentation, and Holiday Buffet, it is obvious the CKC is seeing nice ponds, nicer koi, and eating well.

The following report was presented to AKCA Board of Directors and concerns the AKCA Annual Meeting to be held in Fresno in June. Details are in the KoiUSA magazine. Of importance is the Lab portion of the KHA Certification Class is held at the Annual Meeting and is being opened to local club members to attend. This is part of the KHA intention to reach out to clubs to promote good Koi health practices. "Local" is a generic term and from a national perspective would include any club in our area. That means we are invited to attend and there is no fee. The dinner meeting is always interesting and has good speakers. We pay for our own dinner and if we stay at the Raddison we get a discount simply by saying we are AKCA. Something to consider.

## **Scientific Committee Report**

by Jerold Kyle, Director KHA

Plans are being formulated to attend the Annual AKCA Business Meeting in June where the KHA will use the opportunity to present a Lab, Lecture, Question and Answer session for KHA members and invite local area club members to attend to learn and appreciate what KHA is all about.



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## March Meeting

March's meeting was at High Hand Nursery in Loomis. The High Hand was originally a packing shed. I knew of the nursery which stressed quality but, not the rest. This is not the Home Depot kind of nursery with long rows of tables filled with products. This is more of a wandering garden space with areas of various plants and features including a pond with Koi, statuary, seating areas, topiary, garden art, and more. It is behind this, in the back that can be found huge rows of plants and a large greenhouse where they raise their own plants. The Koi Pond is different too. I am used to seeing waterfalls and streams running to and ending in ponds. I am not used to seeing a pond that overflows into a stream which runs for a way and disappears into the gravel. The good folks at High Hand presented the history and brief tour of the facility. It was very interesting. We also recognized Gus Cubillo as CKC Koi Person of the Year.



Indoors at  
the  
High Hand  
Nursery



Oh look!  
A Pond!



Jerry and  
Gary  
philosophize  
by the pond



People  
acting like  
they've  
never seen  
koi before!



Oak on the  
pond



Koi Person  
of the Year  
(Intrepid  
computer  
geek)



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## April Trip...

### Bay Area Koi Dealer Tour

*(check out their websites)*

- Tse Koi of San Jose
- Champion Koi of San Jose
- Genki Nishikigoi of San Jose
- Cherry Hill Koi and Water Garden

### April 29 at 7:30 a.m.!

Rendezvous Schedule

7:30 a.m. Meet behind Starbucks across from the Galleria in Roseville. Let Marilee know if you're coming so we can plan on carpool needs, or wait for you a bit if you're late. **(530-269-2742 or 530/320-9970 cell)**

We can pick up anyone on the way south if you let us know your location

9:00 a.m. Hwy 5@Hwy12 Denny's parking lot in Lodi. Let Jerry know **(as above 209/368-9411)**

11:00 a.m. San Jose with lunch when convenient



## Board of Director Meeting for March 25, 2012

Meeting called to order by Jerold Kyle, Pres. at High Hand Nursery in Loomis, Ca. Also present were. Duane Carlson, Vice Pres, Georgia Vonk, Treasurer, and Directors Betty Martin, Gary Waldsmith, Sharon Oswald, Jose Delgadillo along with members Phyllis Kyle, Melody Carlson, Dan and Cheryl Alarid, and Jean Jahr.  
Treasurer Report March 2011:

<b>Beginning Balance</b>	<b>\$8476.89</b>
<b>Expenses</b>	<b>593.47</b>
Liability/Equipment Insurance (\$582) refund overpayment dues (\$10) and paypal fees (\$1.47)	
<b>Income</b>	<b>160.00</b>
Renewals: Many folks have yet to pay their 2011 membership fee	
<b>Ending Balance</b>	<b>\$8043.42</b>

It was reported that Gus Cubillo was the only member nominated for 2011 Koi Person of the Year and that four individual members vied for the privilege of making the nomination. In the general meeting to immediately follow, Gus will be running unopposed.\*

Ideas were discussed for monthly meeting locations. A Dealer Tour of selected Japanese Import Dealers in the San Jose area has not been held for a number of years and an April 29<sup>th</sup> car pool trip to the area will constitute our April meeting. Georgia will check cost of renting a bus while car pooling will be used if bus too expensive.

A Combined Pond Tour and Progressive Dinner Meeting was discussed for May 20. Dan announced he had volunteers for 4 locations. Georgia suggested 5 locations so we could have a "Poker Run." Hosts will have opportunity to prepare food only if they choose as hosts will not be expected or required to provide any food. Being host is enough.

Other locations and months were discussed and will be finalized.

\* Gus was officially elected at following meeting by unanimous vote as 2011 Koi Person Of The Year for all his work including being Webmaster and sending out the Koi Ahoy each month, and posting important messages to the membership.



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## Garry's Did You Know?

by Garry Chin

*This article is being repeated from last month because of the resulting problems we're having right now from the extreme rains this month. It's timely. **Editor note***

## pH

What is pH? pH is a German initial for potenz Hydrogen. In chemistry, **pH** is a measure of the acidity or basicity of an aqueous solution. Pure water is said to be neutral, with a pH close to 7.0 at 77 °F. Solutions with a pH less than 7 are said to be acidic and solutions with a pH greater than 7 are basic or alkaline. pH measurements are important in medicine, biology, chemistry, agriculture, forestry, food science, environmental science, oceanography, civil engineering and many other applications. In a solution pH approximates but is not equal to p[H], the negative logarithm (base 10) of the molar concentration of dissolved hydronium ions ( $H_3O^+$ ); a low pH indicates a high concentration of hydronium ions, while a high pH indicates a low concentration. This negative of the logarithm matches the number of places behind the decimal point, so, for example, 0.1 molar hydrochloric acid should be near pH 1 and 0.0001 molar HCl should be near pH 4 (the base 10 logarithms of 0.1 and 0.0001 being -1, and -4, respectively). Pure (de-ionized) water is neutral, and can be considered either a very weak acid or a very weak base, giving it a pH of 7 (at 77 °F), or  $0.0000001 M H^+$ .<sup>[2]</sup> The pH has no upper or lower limit and can be lower than 0 or higher than 14,<sup>[3]</sup> although with water, it is limited by the acidity and basicity of water.

So did you get any of that? I thought so! So unless you just took chemistry in college or are in one of the fields listed above that information went way over your head. In other words...totally useless dialog. For me, I just wanted to show Mom that I got something out of the college education she spent \$\$\$\$\$ on. LOL! What does pH mean for pond keepers? **This article is actually geared towards the vast majority of garden pond owners who are willing to "take care" of their pond water, but don't want to become chemists in the process!**

**NOTE:** What I am offering here is ENOUGH important information that will arm the "average" backyard ponder and Koi owner to be successful in maintaining an aquatic environment that will support healthy Koi.





## **So what is pH and how does it effect the health of our Koi?**

pH is an extremely important pond water parameter that needs to be monitored, corrected (if need be) and stabilized. pH naturally fluctuates with the lowest readings in the morning and the highest readings in the evening. This fluctuation, however, should be gradual and not more than .5 during the day. Koi live best in water with a 7.0 to 8.0 pH.

The pH of water determines the solubility (amount that can be dissolved in the water) and biological availability (amount that can be utilized by aquatic life) of chemical constituents such as nutrients (phosphorus, nitrogen, and carbon) and heavy metals (lead, copper, cadmium, etc.). For example, in addition to affecting how much and what form of phosphorus is most abundant in the water, pH also determines whether aquatic life can use it. In the case of heavy metals, the degree to which they are soluble determines their toxicity. Metals tend to be more toxic at lower pH because they are more soluble. Water is constantly rushing (leaking) into the koi through their skin and gills. The kidney is responsible for pushing that water out. Water with a low pH scale is getting into the fish, and this requires that the body mobilize its own natural buffers to sustain the blood pH. If these buffers are quickly exhausted and the blood stream suffers a low pH this is called acidosis which can be **terminal** for Koi.

## **Monitoring pH**

Simple pH test kits are available for ponds and water gardens. **Do not** use pH test kits for pools. Use drop test kits because they are easier to read and tend to be more accurate. They also do not cost an arm and a leg. Other more sophisticated test kits are available for the professional or advanced koi-keeper.

Coming out of a Winter's rest, when major changes or major additions have been made to the pond the pH should be tested about once a week normally - give or take - or any time that the fish are acting strangely or a fish dies. New ponds should be tested more often.

## **What is the ideal pH for koi?**

As to whether what ideal pH should be, there is no such figure for a Koi pond, though most koi can thrive at a stable pH level between 6.8-8.2 - **as long as the pH stays consistent!** After a period of time when pH was measured regularly how often should the pH be tested? I firmly believe the worst thing a pond keeper can do is to constantly measure pH once it has matured... Remember the optimum word is stability. Stability, therefore, is the most important part of pH. Larger bodies of water stay more stable than smaller ones. Smaller ponds are more apt to have unstable pH than larger ponds. Our koi ponds and water gardens are less stable than a natural lake. Stabilizing a small pond is pretty easy. Just perform regular water changes. In some countries people use marble chips for its stabilizing properties or use a powder that does the trick and lasts for most the season or until you change the water. I prefer performing normal water changes as it goes a long way towards having a stable pond.

## **Okay, what pH problems should be of concern for koi?**

Some of the common pH problems include pH Swings, pH Crashes and lastly complacency.



## Extreme pH Swings

Extreme pH swing occurs when pH varies more than .5 in a 24-hour period, the water experiences what is called a extreme pH swing. Extreme swings are very dangerous, as they interfere with basic body functions, leaving fish vulnerable to stress and disease.

Why Are Extreme Swings In pH Such A *BAD* Situation?

Stability of pH is what we should aim for. Rapid changes in pH can cause extreme stress to our Koi, quite similar to shock in humans.

**\*\*A sudden change of a half or more pH unit in an established pond is an indication that something happened and you need to investigate the cause.\*\***

An established pond will normally maintain a pH reading about ½-unit above or below the pH of your tap or well water. This is fine. But extreme swings up or down are not what you want!

**Increasing pH** may be an indication that lime is leaching out of concrete. Evaporation can, to a lesser degree, also cause an upswing.

**Decreasing pH** is primarily due to bacterial action taking place, which often is caused by lots of debris and sludge on the pond's bottom.

## How to Handle pH Swings

**If you've got out-of-control pH problems and there are Koi or pond fish of any type in your pond ... FOLLOW the following procedures.** Attempting anything else, which includes adding chemicals for pH up or down control, should be done only under EMERGENCY conditions. Attempting to lower pH chemically is not only potentially hazardous to you, but also to your bio-filter and the fish.

Pond fish and Koi do NOT like rapid pH swings. I've already mentioned that. So ... what do you do?

**pH is rising into higher levels:** conduct daily water change-outs to bring the pH back into your pond's "normal" range.

**Perform a pH test after each change-out and again in 24 hours.** **\*\*Also check the pH of the water you are adding as it may be part of your problem.**

- **pH of 9.0** Do a daily 10% - 25% water change-out
- **pH of 10** Perform a 25% - 50% water change-out
- **pH over 10 DANGER!** Remove all fish (make sure you have first established proper water parameters and such before you transfer the already stressed fish into another body of water). A massive water change-out is needed, but quite frankly you need to immediately address what made this happen!

**pH is dropping:** a pH that gets down to the 7.0 range or below is normally observed in a liner based or older concrete garden pond. Briefly (without going into all the Scientific's) the alkalinity has been "consumed" by the biologic activity in the filtration system and the pH suddenly drops. This is referred to as a "pH crash". So, what to do?



- Begin water change-outs and increase aeration to the pond water
- Add good 'ol pure baking soda (any generic brand is quite OK and cheaper than the name brand)

**How much baking soda should you add?** Well ... though you almost cannot overdo the addition of baking soda in emergency situations, I would start with approximately 16-ounces per 500 gallons of pond water. You don't have to be too worried about adding too much baking soda at this point. The fish will hopefully not be any worse off than they already are.

**If possible, mix it up in a large bucket of water and pour into the pond.** Otherwise, dump it in! It will dissolve quickly enough. Wait about one hour and then test the pH level. You will probably find the pH has climbed to around 8.0 or higher.

### **pH Crash (acidosis)**

pH crashes occur when the water in the pond is not stable (also called alkalinity) and the pH suddenly plummets down below 7.0. We have seen it as low as 5.0. Your pond's pH is at its lowest level during the wee hours of the morning so a pH crash most often happens around or just before daybreak. Small bodies of water are less stable than large ones so a crash is more apt to happen to smaller ponds (of less than 2000 gallons), holding, hospital or quarantine tanks and liner.

### **How to Recognize, Correct and Prevent a pH Crash in Your Koi Pond**

pH crashes occur when the water in the pond is not stable and the pH suddenly plummets down below 7.0. It has been seen as low as 5.0. Your pond's pH is at its lowest level during the wee hours of the morning so a pH crash most often happens around or just before daybreak. Small bodies of water are less stable than large ones so a crash is more apt to happen to smaller ponds (of less than 2000 gallons), holding, hospital or quarantine tanks and liner ponds. Low pH is acidic. A sudden drop would feel to the fish like they were being lowered into a vat of acid. If pH was temperature - it would be hot. A pH crash kills fish (often not allowing any to survive), damages plant life and kills the nitrifying bacteria in your biological filter and makes you have to literally start the ecosystem of your koi pond or water garden all over again.

### **Recognizing a pH Crash**

The tell-tell signs of a pH crash are: Skin peeling on the fish / Finding all the fish dead in the morning / A reading of less than 6.8 when tested after the episode.

### **Correcting the pH**

Large pH changes can be harmful if possible you should gradually change the pH of your pond so that it doesn't shock the fish. In the case of a crash you have to think about the "fire" that any surviving koi or goldfish are feeling and it's the lesser of two evils to get that pH up and fast! It's best to change the water out almost entirely. If there are no survivors then you can certainly change it out at your convenience but if there are surviving koi you need to treat it as an emergency and act quickly. Remember when changing the water to add de-chlorinator if you are using a municipal water source.

- **Emergency Procedures**
- **If you know you've had a pH crash and there are surviving koi do an immediate water change to bring the pH to a normal range. (Don't forget the de-chlorinator if necessary)**



- If a water change cannot be done immediately, add baking soda to bring up the pH every 30 minutes until 7.0 is reached or use pH Up.
- Pour in pH Stabilizer when the pH is between 7.0 and 8.0.

### What to Expect Next

Once the pH is corrected after a crash expect problems with ammonia and nitrites. A pH crash kills the nitrifying cycle of your pond and you must start re-seeding your biological filter immediately. The surviving koi of a pH crash will be stressed to their limits and they are still not out of danger. Any underlying problems (scarred gills, presence of parasites, bad water quality, etc.) will affect the koi much more than if the koi were not stressed. Try to keep the stress factors down and watch your koi carefully for signs of secondary problems.

### Preventing a pH Crash

In a Liner Pond the best way, by far, to prevent a pH crash is to simply add pH Stabilizer to the water every 4th month or so or whenever you change out a major portion of the water. Always have on hand a pH test kit that is not beyond its expiration date and pH stabilizer. In other ponds, remove all waste from koi, dead leaves, plant waste, muck, excess food, etc.

### Old Pond Syndrome (Complacency)

It happens to the best of us. It was great when it started, but after a while the excitement of newness begins to wear off. You no longer rush home just to be near, and your desire to meet every need has diminished to the point where you just seem to be going through the motions. The honeymoon's over; you take for granted the things you once cherished. You hope it's just a phase, but deep inside you fear you're headed for.... **"Old Pond Syndrome"**.

OK, so maybe it's not quite true that "Ponds are People, Too". But the analogy may be worth considering: a neglected or poorly maintained pond may superficially appear to be doing just fine, but disaster may be brewing beneath its surface.

Perhaps the most important concept to bear in mind is that home ponds are very "closed systems" - in essence meaning that, with few exceptions, everything we put in the pond stays there, in one form or another, until we take it out. The top-off water added during the last six months, are all still in there somewhere in the form of minerals - unless we have taken steps to remove them. Some minerals will now be in "good" forms (for example, much of the protein in the koi food will hopefully be in the form of bigger, healthier koi), but others will occur in forms more detrimental to the well-being of our prized pets.

The first and perhaps best indicator of potential problems is rising nitrate levels. As the end product of the breakdown of fish waste, nitrate is released into the water on a continual basis. In a neglected pond, nitrate accumulation knows no bounds, sometimes reaching several hundred parts per million. Many plants and some koi are directly affected or even killed by high nitrite levels, but elevated readings should be of concern even to keepers of hardier koi. If nitrate levels are continually rising, it can be assumed that other, more threatening but harder to test, compounds are accumulating as well.



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The same processes that reduce ammonia to nitrite to nitrate also produce an abundance of hydrogen ions, which, if left to their own accord, acidify the water. In water from some sources that contain few "buffers" (ions that help stabilize pH by combining with excess hydrogen or hydroxyl ions), pH will tend to decline steadily just as the nitrate increases, and again regular pH testing may help alert the koi hobbyist to impending trouble. However, in more heavily buffered water, an interesting but more threatening phenomenon occurs. As hydrogen ions are produced, they are immediately tied up by the buffer ion, and the pH remains roughly the same - until all the buffer ions are used up. At this point, the pH drops rapidly, and this sudden "pH crash" can be very damaging to koi.

If this process is allowed to continue (and a few, very hardy koi survive), another interesting biochemical phenomena occurs. At a pH of about 5.5 or less, the bacteria that usually convert ammonia to nitrite are inhibited, so ammonia levels begin to rise. Strangely, though, the low pH actually protects the remaining koi by keeping the ammonia in the non-toxic ammonia (molecular) form instead of the very toxic ammonium (ionic) form! It is not uncommon to see an old, neglected pond with a pH reading off the bottom of the chart, ammonia and nitrate off the top, and a couple of old-timer koi still swimming about.

In some cases, ponds get little maintenance, but need to be "topped off" regularly with additional water to replace that which has evaporated. If the source water is buffered and its addition frequent, the pH crash and resultant ammonia rise might be forestalled, but a new problem is encountered. When water evaporates, only pure, clean, H<sub>2</sub>O leaves the system; all the other minerals and impurities are left behind in the pond. Adding more water means adding more minerals (and by definition buffered water has significant amounts of minerals), in effect concentrating them. Such ponds often show acceptable pH and ammonia levels, but high nitrates and hardness.

In some rarer situations, notably in "natural" or some ponds in which plants, rather than bacteria, are the primary nitrogen consumers, the inhabitants could be suffering even if nitrate and ammonia readings are very low and pH steady or a bit high. Rarely is any pond so well balanced that no by-products are accumulating and no necessary elements are in decline.

In either of the above scenarios, the koi that survive such declining water quality often become mere shadows of what they could be. Poor conditions limit growth and color, and may contribute to conditions like "hole-in-the-side" and "head-and-lateral-line-erosion". In fact, the old myth that "a koi will only grow to the size of its pond" may well be attributed to the stunting that occurs in poorly maintained ponds. Other fish may appear to remain unaffected, at least to the casual observer, which may lead to yet another calamity.

An unwary koi hobbyist is most likely to be rudely awakened to Old Pond Syndrome when he attempts to add new fish to his existing collection. Many koi "shock out" upon introduction to this very different, harsh environment and simply perish within a few hours or days. Others may survive the initial shock, but the acute stress of this radical change in environment weakens them, making them more susceptible to infection. Ironically, disease-causing parasites may well be so successful at attacking these weakened koi that they quickly multiply to epidemic proportions, and wreak havoc on the original residents as well.



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The koi hobbyist might be inclined to blame the dealer for "selling sick koi"; after all, he hadn't lost any koi or seen a sign of disease in several months - or maybe years - before making this purchase. "Obviously," he/she argues, "there's nothing wrong with my pond, or all my koi would have died long ago". But that isn't necessarily the case. The original inhabitants had the opportunity to become slowly accustomed to waste buildup. The hardier specimens adapted to the chronic stress and survived. Weaker individuals were overcome one at a time, perhaps over a period of months, and their deaths attributed to natural causes.

We'll leave this koi hobbyist and dealer to wrangle over replacement policies, just as many others have done before them, but hopefully take with us the knowledge that such tragedies don't need to happen. Good, regular pond maintenance is both the prevention and cure for Old Pond Syndrome.

Filtration - at least "mechanical" and "chemical" filtration - can remove some specific compounds from the water, providing the filter media is cleaned or discarded periodically. "Dirt" that is stuck in a mechanical filter or adsorbed in a chemical media is still part of the pond environment until the mechanical filter media is removed from the filter. Interestingly, "biological" filtration does not actually result in the net removal of waste; it simply converts one form into a different, hopefully less dangerous form (for example toxic ammonia is converted to less toxic nitrite and then into relatively safe nitrate).

But no filtration system removes everything, and there tends to be a continuous accumulation of waste products and other compounds in every pond until - you guessed it - a water change is performed. A 25% water change removes 25% of the nitrate and ammonia and restores 25% of the buffers, all in one fell swoop. Water changes can be performed as often as desired, assuming that there is suitable water readily available, and should be performed as often as necessary to keep nitrate and pH levels stable. A typical pond might require a minimum of 25% changed every two to four weeks, while a crowded, overfed pond or small pond may need to be serviced weekly.

If a pond is found to be experiencing Old Pond Syndrome, water changes are again the treatment of choice, but care must be taken not to attempt too great a change at once. Sudden changes in environment are always stressful to fish, even if the changes are for the better. Furthermore, if the pond has already gone into the low pH / high ammonia phase, a rise in pH will change non-toxic ammonia into lethal ammonium and lead to catastrophe. Daily changes of 15% to 20% are safer and as effective as the one-time 50% to 90% cleaning we might be tempted to perform. Constant monitoring of pH, ammonia and nitrate are highly recommended during this process. If ammonia levels remain high while pH is being raised, it is wise to back off the water changes for a few days to allow the ammonia-eating bacteria the chance to catch up.

Lastly, once proper conditions have been restored, a regular maintenance program, including water changing, filter cleaning and perhaps chemical testing, should be set up and followed. A well-maintained pond is a thing of beauty and wonder, and who knows, it just might rekindle a long-lost flame.

Happy Ponding!!!



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## 2012 Club Calendar (to date)

<b>Date</b>	<b>Topic</b>	<b>Location</b>
January 20	Winter update	Marilee & Jim's Auburn
February 26	Flora Tropicana	Elk Grove
March 25	High Hand Nursery	Rocklin
April 29	Bay Area Koi Vendor Tour	San Jose
May 20 (3rd Sunday)	Intraclub pond tour, progressive dinner, and poker run	
June 24	Golden Pond	Rocklin
July 29	Annual Potluck	Lake's Nursery (proposed)
August 26	Annual Club Koi Auction	
September 30	Proposed show in West Sacramento	
October 28	Spaghetti cook-off Challenge	
November 18 (3 <sup>rd</sup> Sunday)	TBD	
December	Christmas Party 2:00 p.m.	Umeko in Sacramento

If you would like to host your pond and house next year, please let Duane Carlson know. We will be delighted to schedule your convenient month.



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Attention CKC. Here is an announcement from the High Desert Club.

**ATTENTION POND AND WATERGARDEN ENTHUSIASTS  
SUMNER AVENUE WATER GARDENS AND THE HIGH DESERT KOI FANCIERS  
PRESENT.....**

**HIGH DESERT PONDPALOOZA 2012  
CLUB FUNDRAISER**

**MARK YOUR CALENDARS/ DON'T MISS MAY 5th , 10 AM TO 4 PM  
HOSTED BY WALT AND MARY FRAME OF LANCASTER, CA.**

EVENT SCHEDULE:

GUEST SPEAKERS

LIVE BAND

Being Cinco De Mayo- Live Mariachi Band !!

CATERED LUNCH

Being Cinco De Mayo- Catered Mexican Food !!!!!

LIVE KOI AUCTION

HUGE RAFFLE

COST: **\$20.00** PER PERSON –ONCE YOU RSVP YOU WILL GET ADDRESS,ETC. TO FUNCTION

MUST SEND FORM BELOW AND CHECK BY APRIL 15TH

COST INCLUDES ALL OF THE ABOVE PLUS 2 RAFFLE TICKETS PER PERSON-

ADDITIONAL FUND RAISER RAFFLE TICKETS AVAILABLE FOR \$2.00 EA.

COST ALSO INCLUDES FREE ENTRY FEE FOR KOI AUCTION

NO REFUNDS – SEND PAYMENT TO

MIKE PRZEWOZNIK

27837 SUMNER AVE

SANTA CLARITA , CA 91350

MAKE CHECKS PAYABLE TO MIKE PRZEWOZNIK 661/297-0563

NAME: \_\_\_\_\_

PHONE: \_\_\_\_\_

# OF ADULTS : \_\_\_\_\_

# OF CHILDREN : \_\_\_\_\_

TOTAL ENCLOSED: \$ \_\_\_\_\_



# Koi Ahoy

April  
2012

## 2011 Board of Directors

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