



# Koi Ahoy

February  
2012

## PRESIDENT'S MESSAGE – Jerry Kyle

February, 2012

It was a long drive for some of us to Marilee's home and pond but we were well rewarded. The Board meeting was held an hour before the meeting in Jim's large Indian Teepee. After that the club meeting began with a rush to the dining room to enjoy Marilee's famous Taco Soup. I had no idea Taco Soup could taste that good. It was difficult to get the meeting started in the adjoining living/family room as so many could not be pried away from the dining table with soup and other contributions by members.

When we finally got down to business it was confirmed we will not have a Koi Show this year but will be open to one next year. We used to alternate between a show and a tour in the past. It was unanimously agreed to have a Pond Tour and ideas abounded. Dan Alarid will chair the Pond Tour Committee and encourages anyone to contact him as to how much or little they can participate and/or be on the committee. He is looking for volunteers to offer their ponds for this event. Unlike in the past when a tour meant strangers straggling in at all hours of the day, this year will be different. We will not spend \$\$\$ advertising and pay for it with ticket sales. This will be a club member and their guests only Pond Tour/Progressive Dinner Meeting. We will all begin at the same time at the same pond. As we progress from pond to pond we will enjoy only one item of a multiple course meal. Arrive, enjoy a pond while having one course of the meal and everyone moves on to the next pond and next course within 45 minutes. No host has to put up with us for more than an hour. No stragglers to deal with dropping by all day. No strangers casing the place. This will be only for us and our friends and should be fun. We need to find locations so Dan needs to know who will step up and be a host for only an hour or less. Please help. Pond hosts do not need to cook, just provide a pond. Others will provide the food. There were many other ideas for enjoyment but we need to concentrate helping Dan find ponds as a priority. Koi auction, field trip to Bay Area Importers, new ponds, learning to recognize trouble with the microscope, water garden nursery demonstrations, and an independent small koi Koi Show are just some of the things being researched. Stay tuned for more fun. And good food. Read Marilee's minutes of the meeting for more information on happenings. Dan's email is [runrdan@frontier.com](mailto:runrdan@frontier.com). We need to contact him to have this pond tour.

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### AKCA REPORT:

Camellia Koi Club Report to AKCA, Feb, 2012

The CKC just had its first meeting of the year which is traditionally an organizational planning affair. On the table for 2012 is a combination Progressive Dinner/Pond Tour for members and guests, a lab course to teach recognition of microscopic problems, a tour of Koi import dealers, new ponds to see, club Koi auction, visit to a Koi artist studio, water garden nursery demonstration, and participating in an independent dealer's Small Sized Koi Show to learn what to look for in Tosai. Plans are to update and improve our website to be more users



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friendly and a go to place for others. It is going to be another interesting year for CKC members. We are not surprised.

January's meeting was at Jim and Marilee's house in Auburn. If you missed the meeting you missed the first ever Camellia Koi Club Board of Director's meeting in their 23" tipi. The day was pleasantly warm, but the pond water was still below 50 degrees, and the fish were shy about coming to the surface. They hadn't eaten in over 2 months, and showed little interest yet. One of additions made to the pond was an innovative UV. Instead of 10-20% weekly water changes, there is a very slow drip of irrigation water going into a small 40 watt UV before dripping into the pre-filter. What this has achieved is killing off any nasty bugs that can come in with contaminated water by a more lengthy exposure to the UV. Since this installation, she no longer has the sick fish/sick pond that was becoming an annual nightmare. During the bubble bead filter cleaning and resulting drop in pond water level, the drip rate is increased for a day or two.



Tipi meeting place at January BOD pow-wow.



BOD's in the tipi making plans.



Curiosity brought the koi up from where they had been sleeping.



They can't pass up an opportunity to check out their admirers.



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Pond winter  
scape.



Winter is  
always a  
good time for  
tortilla soup  
and all the  
shared  
goodies.



Group  
discussion.



Excitement  
planni  
ng the  
spring  
pond  
tour.



Group  
discussion.



Drip UV.

## FEBRUARY MEETING IS

Floratropicana is moving their operations to the bay area. This will be the last week at their Elk Grove facility. They are clearing all inventory, and will make some great bargains available to us. Since we will be sitting in the covered area by the fish tanks outside, plan to bring a jacket, a chair, and bring some nibbles to share. *You might want to have lunch before you come since they are in a state of shutting down.*

**February 26th at 1:00 p.m.**  
**Floratropicana**

**10255 Grant Line Road, Elk Grove, CA**

Phone: 916/714-4200

Board of Directors meeting 12:00



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-----COUPON-----

**Flora Tropicana** offers  
**Camellia Koi Club Members and Guests**  
Additional 10% Discounts  
on Plants and Fish, Sunday Feb 26, 2012 only

-----COUPON-----

## Notice:

This month's meeting is at Flora Tropicana in Elk Grove. Marcos is closing this store March 4th and reopening later this spring in Silicon Valley as "Liquid Gardens." We can take advantage of his Discounts off Garden Decor of -50%, Pottery of -60%, Plants of -50%, and Fish of -30 to -50%. Print the coupon for Camellia Koi Club Members and their guests and receive an extra -10% off of fish and/or plants. Anything else not on sale in the store we automatically get 10% off simply by letting them know we are CKC members. Print the coupon and bring a friend and a chair to sit in while snacking. See you there rain or shine

## Board of Director Meeting for January 29, 2012

Present: Jerry, Sharon, Betty, Georgia, Marilee, Dan, Gary  
Minutes of previous meeting approved.

### Treasurer Report end of year 2011:

Beginning Balance	\$8,208.99
Expenses	138.81; business card, host fee, paypal fees
Income	330.00; memberships
Ending Balance	<u>\$8400.18</u>

Membership as of 12/31/11 for year 2012 = 55 paid families. New Roster will be published at the end of today's general meeting.

### Business:

Koi Person of the Year award needs to be identified for publication in AKCA by April 1. It was decided to announce the nominations for this award will be made at today's meeting. Nomination will be open through February's meeting. An announcement will be made in the next issue of Koi Ahoy, and e-mails sent out. Nominations will be e-mailed or called to Marilee for the record.. Voting will be done at the March meeting and by e-mail. A brief resume of each nominee will be posted so everyone will have an opportunity to recall the individual's contributions to the club.

Discussion on the 2012 Pond Tour: Will be chaired by Dan. Date set for May 20. It will not be an advertised/promoted public tour, but closed for the members of CKC and their guests. Dan is looking for assistance from the membership to select 5-8 ponds. There will be a progressive dinner with one course at each pond provided by non-pond hosts (unless pond owner volunteer to do it). Marilee will coordinate food service, and take reservations in advance (for planning purposes). Betty will coordinate a poker run as well. Help for Dan can contact him by e-mail at [runRdan@frontier.com](mailto:runRdan@frontier.com) or phone 916/690-6800.

The calendar for 2012 was opened for consideration.

February will be at Flora Tropicana who is moving his business to the bay area, and this will be the last day for their Elk Grove location. Major clearance prices will prevail and be made available for us to buy. Since it will be outside in their covered fish tank area, members need to bring chairs and coats for the outdoor.

March meeting may be in an artist studio – Georgia will determine



April 29 proposed Bay Area Koi Vendor tour. Bus or car-pool to be determined. – Jerry will find out when new shipment finishes quarantine

June 24 proposed Golden Pond – marilee to follow-up  
July – annual potluck proposed to be at Lake's Nursery  
August – Club koi auction  
Sept/Oct Anthony show vs Spaghetti cookoff challenge  
December Christmas Party – Umeko

Discussion on new website being created by Gus. Looks and sounds fabulous. Gus wants someone to host Facebook link. Betty volunteered to do it. We need a club member that keeps up on general news in koidom, that can give Gus information to post on the website. Volunteer is being requested. Will consult with Jose as well.

## Garry's Did You Know?

by Garry Chin

### Temperature

Beginning this month, I will expand upon the various Water related topics I briefly covered with the January issue of Did You Know. This month I will cover temperature in more detail how it impacts our Koi, water quality, and the feeding of our Koi..

The temperature of the pond normally follows that of its surroundings although with a delay related to the size of the pond. Direct exposure of the pond to open sky can cause larger swings in temperature. Direct sunlight during the day can cause the temperature to rise higher and heat loss on clear nights can cause the temperature to drop lower than shaded ponds. A clear night sky can absorb a large amount of heat from a small pond and actually drive the pond temperature below air temperature.

No matter the time of year you should always be aware of your pond's water temperature. Whether you measure your pond's temperature in degrees Centigrade or degrees Fahrenheit or both, a thermometer is considered a requirement for all ponds. A floating pool or spa thermometer is good. It is recommended that it be floated in the filter/converter system or tied to an easy access point at the edge of the pond. At a slightly higher cost, the electronic indoor/outdoor thermometers on the market (i.e. Lowes, Home Depot) provide a continuous digital readout. Just drop the end of the waterproof outdoor probe into the water. (Note: Small floating glass aquarium thermometers have been swallowed by Koi.). If you have a deep pond a second thermometer would be beneficial so you can measure the water's temperature at the upper and lower levels. As with most things in life the better your understanding the better the decision making will be. By knowing the correct pond temperature you will be able to make an informed decision about what type of food to feed you Koi (i.e. winter based food verses summer based food).



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Events generally happen faster at higher temperatures and in smaller ponds. Over normal temperature ranges, biologic activity doubles for each 10° rise in temperature. The toxicity of Ammonia increases as the temperature rises and the amount of Dissolved Oxygen that the water can hold decreases. Although Koi have been known to survive for limited periods at 100°F and even higher, the mortality rate of fish conditioned to 75°F water increases rapidly above 85°F. Above 80°F, supplemental air may be required. Below 55°F, Koi stop producing antibodies and at about 45°F enter a state similar to hibernation. In your bio-filter bacteria reproduction ceases at about 40°F.

Fish do not like changes in their environment of any kind including temperature. Any changes add stress to the fish and the larger and faster the changes, the greater the stress. This is considered by many to be the primary reason that fish do better in larger ponds.

## **Warm water temperature:**

Ideally, the temperature of our koi pond would be at seventy four degrees Fahrenheit all year around. In a perfect world, this would balance nicely their metabolism, appetite, and the corresponding metabolic function of the beneficial nitrogen reducing bacteria in their filter. Much warmer water creates considerable headaches as far as dissolved oxygen, not to mention that Koi colors blanch in overly warm water. Much cooler than seventy four degrees and then you'll notice that the fish lack energy due to their lower metabolism, but most significantly, the beneficial nitrogen reducing bacteria in the pond (and filter) will not effectively reduce the nitrogen produced by the Koi and then you'll have nitrogen accumulations in the form of Ammonia and Nitrite.

As temperatures raises so does the rate of growth of our koi. Up to a certain point this is true, but beyond a certain point as temperatures rise, the oxygen saturation levels of water declines. At about 86°F there is no further point in trying to achieve higher water temperature as the amount of oxygen that can be dissolved in the water becomes the limiting factor in conversion of food to growth.

When a pond gets very very warm in summer, it's not good. Dissolved oxygen becomes a problem and then if the pond water temperature swings down sharply at night, (enhanced by waterfalls in a phenomenon called "super cooling" - this effect becomes stressful and the fish become more vulnerable to diseases. Unfortunately, oxygen levels in the water and temperature are not synonymous with each other. High temperatures effect the fish because the D.O. (dissolved oxygen) is LOWERED. At the same time the B.O.D. (biological oxygen demand) of the whole system and fish is RAISED. Higher temperatures increase the toxicity of certain substances in the water as well as the invasiveness, and virulence of bacteria and parasitic pathogens. At higher temperatures the rate of decomposition of organics is much faster than at lower temperatures. While temperature is critical to koi growth and health there is a tradeoff between warm water and very warm water. Up to a certain point higher temperatures produce faster growth but often with fading colors.



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In our area if your pond your pond is in a open area and subject to long exposure to the heat during the summer. You should SERIOUSLY consider building an attractive shade-cover for overhead; to shade the pond. Two upright 4x4's planted in the ground could support a square frame onto which standard 2x6 lumber is stood on its edge, oriented in parallel like a grid which will admit some sunlight at midday and filtered light the rest of the day. This is consistent with Japanese shade shelters. It's even more effective if you put weatherproof shade cloth across the top of the shelter.

If you're lucky enough to have free, non-chlorinated water such as you might get from a well, then you could run this water into the pond over the day at a slow rate to keep water temperatures from climbing over eighty two degrees. I would consider that the highest "safe" water temperature.

## **Cold water temperature:**

When temperatures dropped below 60°F, the Koi's immune system had already begun to slow down (at 65°F, the immune system operates at about 50% efficiency; at 60°F it has dropped to about 20% efficiency). Bacteria, both good and bad, are both still very active. The fish still have healthy appetites, and the filter is operating at near 100% efficiency. Aeromonas bacteria are also quite happy at this temperature, and this is why we are entering what has been called "Aeromonas Alley".

At 50°F, the koi's immune system is operating at only about 10% efficiency, while aeromonas is still at about 60%. Some of the warm water parasites have begun to slow down, but the cold-water parasites such as Costia and Chilodinella, are quite content, and can pose a threat to our now low-immune protected koi. Feeding should be almost nil at this point, although the filter is still capable of converting ammonia to nitrites and nitrites to nitrates, so these toxins should not be a problem. The next magic number is 45°F. This represents the low end of Aeromonas Alley because most bacteria have slowed to less than 20% effectiveness. The koi, because they are cold-water creatures (poikilotherms), have begun to enter a state of torpor, and are most likely no longer interested in food. They will be inactive most of the time, spending their days swimming slowly at the bottom, where the water is warmest (more on this later). At 40°F, which is very nearly the coldest temperature a koi can survive in, the filter has ceased to function. Bacteria, both pathogenic and beneficial, are at or near zero percent effectiveness, as is the koi's immune system. In short, everything, both ecologically and physiologically, has pretty much shut down.

Cold water effect on ammonia. As many of us already know, ammonia becomes less toxic at lower pH levels. What many of us don't realize, however, is that it also becomes less toxic at lower temperatures. Mother Nature is being considerate here, because, as was explained above, our filters are no longer capable of converting ammonia below about 45°F, but our koi will continue to release ammonia thru their gills all winter long, even though they are not eating. Ammonia levels could become lethal under these conditions if this were not the case!



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What about nitrites? Nature is again on our side here. Below about 50°F, the koi's metabolism has slowed, and along with it respiration, and thus decreased opportunity to take up nitrites from the water. Once the filter stops functioning, nitrites will no longer be produced, but until that time, nitrites could still build to dangerous levels if we continue to feed.

WATER CHANGES is the best way to control any and all contaminants in our ponds. We will leave a garden hose on drizzle all through the winter, thus avoiding a freeze up in the hose. This also eliminates the need to add a dechlorinator, but if there is any question about chlorine (some parts of the country use very high levels of chlorine or chloramines in the water), sodium thiosulphate should be added at about one tablespoon per 1000 gallons of water added.

## **Feeding and water temperature:**

Koi are voracious creatures and will eat whatever is put in front of them, except in extremely cold temperatures when Mother Nature sets off their metabolic clocks signaling that they should stop eating. So as our Koi's metabolism is slowing down they are not growing as much as during the warmer periods they should be fed food lower in protein.

During colder temperature what goes into our Koi will generally come out in the form of a liquid or solid waste, containing ammonia (NH<sub>3</sub>). During this period food is often not assimilated as well and most of it ends up in the pond as metabolic waste. Also during this period the pond's bio-filter is under performing as the beneficial bacteria is dying off. This combined with the extra ammonia not being broken down leads to water quality issues.

As the water temperature warms up from winter, one should provide our Koi with food that is easy to digest eventually continuing to standard food that contains more and more protein.

This page is a general guide of what types of food should be fed and the frequency of feeding our Koi by water temperature.

## **2011 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	Artist Studio in Dale Webb	Lincoln
April 29	Bay Area Koi Vendor Tour	Proposed
May 20	Possible Bay Area koi buying trip	



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(3rd Sunday)		
June 24	Golden Pond (proposed)	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.

## 2011 Board of Directors

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