

*Shasta Koi and  
Water Garden Club*  
P.O. Box 493425  
Redding, CA 96049  
[ShastaKoiClub.com](http://ShastaKoiClub.com)



Volume 11, Issue 8

**AUGUST  
2014**

# Talk'n bout Koi & Water Gardens

## 2014 Officers

**President:**  
Armando Mejorado

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Tammy Cole

**Treasurer:**  
Eda Eggeman

**Board Member:**  
Marveen Moore

**Webmaster:**  
Armando Mejorado

**Newsletter Editor:**  
Renee Ottzman

*Shasta Koi & Water Garden Club's  
Next Meeting:*

*Saturday - August 16, 2014  
at 10 a.m.*

*Terry & Lori Stewart  
2690 Castlewood Drive  
Redding, CA 96002  
605-1180*

*Refreshments by Tami Gerhard*

*Directions:*

*From Red Bluff: From I-5 take the Knighton Road Exit. From Knighton Road, turn LEFT on Churn Creek Road. Travel north on Churn Creek and turn RIGHT onto Rancho Road. Follow Rancho Road to Shasta View, turn LEFT and go up to Castlewood Drive. Turn RIGHT on Castlewood. 2690 will be on the left.*

*From Redding, find Shasta View and go south to Castlewood.*

# President's Message

AUGUST 2014

*Dear Shasta Koi and Water Garden Club Members,*

*I'm taking the liberty of filling in for Armando with the President's Message. We want to continue in his absence with articles about Koi and pond keeping.*

*I know everyone is thinking about and wishing Armando well. We look forward to him coming back to us as soon as he is able.*

## **Water Clarity does not equal Water Quality**

*KHA Judges' Corner – Water Quality  
(From Koi USA magazine, May/June 2007)*

*In the article “Test Your Judging Skills” by San Francisco Bay Area Koi Club's Ed Thomas, KHA, six beakers of clear liquids are pictured. The reader is asked to select the BEST in clarity and rank them from first to sixth.*

*Each container is absolutely clear and all look exactly the same, except for container “F” which has a toothpick with two olives shown floating at the top.*

*To look at a pond with clear water, we naturally assume it is in perfect condition, but as you read through this article, you'll see the reasons why water clarity does not equal water quality.*

*Container “A” - Testing for Ammonia reveals the reading to be “off the chart.”*

*Ammonia has no color, but is the MOST damaging and deadly natural poison we face. Because koi constantly produce ammonia through respiration and feces, it is always present; and it is necessary for the growth of bacteria which convert ammonia into nitrite and later into nitrate. Simple test kits can keep you appraised of the ammonia content in your pond.*

*Container “B” - Testing for pH finds it to be 4.0 which means “highly acidic.” This condition is not good for koi or the filter because at a pH of 5.0 the bacteria are dead. You could possibly see this after a “pH crash” or heavy rains which are acidic.*

## Water Quality (continued)

Container "C" is plain old tap water which can contain chlorine and chloramine. If these are not neutralized, they can damage, if not kill, koi. Some say small amounts are not harmful because they dissipate in sunlight and aeration. This holds true for chlorine but not for chloramine. Chloramine need to be removed through filtration or chemical additives. Any exposure needs to be eliminated wherever possible.

Container "D" looks clear but is actually off the charts for Nitrite which is the second deadliest natural poison to our fish. Nitrite replaces oxygen in the blood stream resulting in "Brown Blood" syndrome which is lethal. (More on Brown Blood syndrome in another issue.)

Container "E" is filled with distilled water with no mineral content. It would be detrimental over time if this were the only water they had. Koi extract needed minerals from the water necessary for their health.

Container "F" - This clear liquid would have a significant effect on koi as well as people, no matter how many olives you add. Not to be counted out are pesticides, fertilizer and other poisons that can find their way into pond water.

**In Summary:** "Gin" clear water is not necessarily healthy water. So, for the purpose of this judging contest, there is no winner except for the pond owner who will no longer associate clear water with quality water.

The most common things that stress koi are poor water quality, parasites, bacterial infections and viral infections. If one or more koi are showing symptoms of stress such as flashing, hanging with clamped fins or isolating themselves, START by testing your water. By understanding your water parameters, most if not all of these conditions can be avoided.

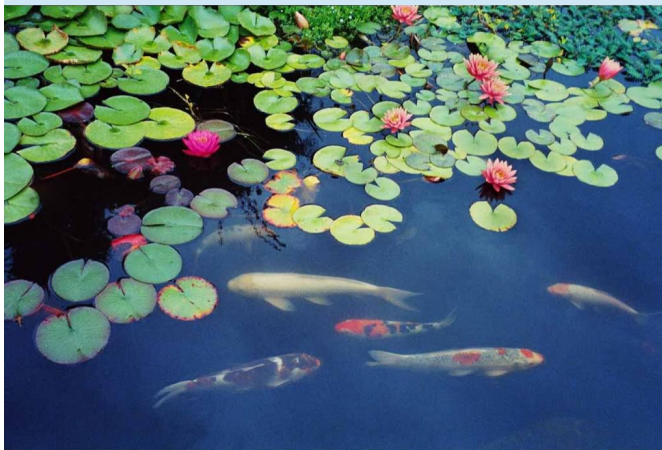
My personal recommendation is to perform weekly water changes at 10% or so. Testing and keeping a log book is also a good idea. When you have a problem with a fish you can look back to see your last test results. An old saying goes something like this: "If you take care of the water, the water will take care of the fish."

On behalf of:

Armando Mejorado, President  
Shasta Koi & Water Garden Club

# Hot Weather Pond Tips...

The source for these tips is an article by Ray Jordan of the Atlanta Koi Club.



The biggest hazard to your fish in the hot months is low oxygen. Air breathing creatures like us live in an oxygen rich environment that is about 21% oxygen.

However, the amount of oxygen dissolved in water is so small it is measured in parts per million. At 90 degree Fahrenheit, only about 7.0 parts per million of dissolved oxygen can be maintained in fresh water.

It would take a lot of aeration to get your ponds oxygen to near saturation levels. 7.0 ppm is about 50,000 times less oxygen found in the air we breath. At elevations above sea level the amount of oxygen would be even less. There is really very little cushion when you consider that koi and goldfish become stressed at oxygen levels at 4.0 ppm and start dying at 3.0 ppm.

Hopefully this gives you some appreciation of how important aeration is to your fish. Also, remember that the beneficial bacteria that live in your filter are dependent on the

amount of oxygen in the water to thrive and do their job of converting ammonia to nitrites and nitrates by utilizing the dissolved oxygen in your pond as well.

Low oxygen levels suppress the “good” bacteria and let ammonia levels increase to potentially dangerous levels.

Aquatic submerged plants like algae are both beneficial and detrimental to oxygen levels. During the day green plants produce oxygen. However, at night, these same plants consume oxygen and compete with your fish for the limited supply of oxygen in the water. This is why fish kills usually happen in the early morning hours. For this reason you should measure your oxygen levels early in the morning.

So, how do you measure your pond's oxygen level and correct it if needed?

The easiest method is to buy an oxygen test kit. Be sure to get one for fresh water. Fill the test tube to the required level and add the reagent and match the color to the chart. You will need to know your pond's water temperature to determine how “saturated” your pond is with oxygen.

You cannot add too much oxygen to your pond. With this in mind, you should place additional air stones in your pond during the hot summer months. If your current air pump does not allow for additional air stones, consider buying another pump.

*Be aware, if your power goes out during these hot months, you won't have much time before the oxygen is depleted if the oxygen level is not at maximum saturation already.*



*Consider building an arbor over your pond or a trellis to help provide some shade.*

*If you have water lilies, try to get 50-60% of the water surface covered. Increase your water circulation and if you have an outside filter system for your pond, try to create some shade for it as well.*

#### Reduce feeding

*Reduce the amount of food you feed and also reduce feedings to only once or twice a day. Try to feed in the morning or late evening when the water temperature is lower. Optimum water temperature for koi and goldfish is between 70 to 78 degrees. Once your water temperature goes above that level, over feeding can cause problems with ammonia levels and oxygen depletion.*

*How much aeration should you have in a healthy, moderately stocked pond?*

*I would suggest a minimum of 80 liters per minute per 3,000 gallons of water. This can be supplied in a variety of ways. Use air stones positioned in your pond, waterfall area or filters. Some types of filters also require aeration which counts toward your total as well. It is almost impossible to supply too much aeration to a koi pond in the warmer summer months.*

#### Water temperature:

*You need to do what you can to keep your pond water temperature from getting above 90 degrees.*

*You can assume your fish are stressed if your water temperature goes over 90 degrees or your pond temperature changes by more than +/- 5 degrees during the day. Find a way to shade your pond or place tall potted plants to help provide some relief.*

*Warmer water and stressed fish can also mean increased susceptibility to parasites. Anchor worms and fish lice can be seen without a microscope but flukes and other microscopic fish parasites cannot.*

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# *FYI:*

*SEPTEMBER 6 – 7, 2014*

*Washington Koi & Water Garden Society's  
23<sup>rd</sup> Annual Koi Show  
Country Village, 23732 Bothell-Everett Highway  
Bothell, Washington*

*Viewing is free to the public*

*A koi auction will be held on Sunday, Sept. 7<sup>th</sup> from  
12:00-1:30 pm. Contact Nancy Moore via e-mail at  
[nancymoore@pioneer.net](mailto:nancymoore@pioneer.net)*

*SEPTEMBER 20-21, 2014*

*Northwest Koi & Goldfish Club's  
34<sup>th</sup> Annual Koi Show  
10500 SW Beaverton-Hillsdale Highway  
Beaverton, Oregon*

*Contact Daren Beck, Show Chair at [beckoi65@gmail.com](mailto:beckoi65@gmail.com)*

*SEPTEMBER 26–28, 2014*

*Central California Koi Society's 36<sup>th</sup> Annual Koi Show  
Fig Garden Village  
5082 N. Palm Avenue, Palm & Shaw  
Fresno, CA*

*Contact Rosimeri Tran, Show Chair at [cencalkoi@gmail.com](mailto:cencalkoi@gmail.com)*

*KOI USA Magazine*

*Subscriptions to Koi USA are \$25 for one year (six issues) with  
special rates for AKCA club members. Be sure to mention our  
club name to get this discount.*

*Renee Ottzman, Newsletter Editor*

<i><b>MONTH</b></i>	<i><b>HOST 2014</b></i>	<i><b>REFRESHMENTS</b></i>
JAN		
FEB	Stoker	
MAR	SKIP-----	
APR	Kirk & Sue Hall	
MAY	Koi Show	
JUN	Laubin	
JUL	SKIP-----	
AUG	Terry & Lori Stewart	Tami Gerhard
SEP	Club BBQ	Potluck dinner
OCT	Auction - Stoker	Karen Wing
NOV	SKIP-----	
DEC	Christmas Party	

## Hosting

If you are interested in providing the refreshments for any upcoming meetings that have not been filled, please e-mail Renee Ottzman.

[ROttzman@ymail.com](mailto:ROttzman@ymail.com)

# Become a Member Today!

Our meetings are a time to socialize in good company about the Koi and Water Garden hobbies. Short programs about ponds, plants and Koi are a part of every meeting. We make trips to various shows and pond tours around the state. We hold our own Pond Tour every other Spring and Koi Auction in the Autumn. Meetings are every 3<sup>rd</sup> Saturday of each month at 10am at various members homes. We hope to see you there!



## Want to Join?

membership application can be printed and you can mail your dues to:

***Shasta Koi, PO Box, 493425, Redding, CA 96049***

OR. Ever Better, your dues can be paid in person at the meeting.

Our intrepid treasurer will accept:

Checks or Cash (checks payable to: ***Shasta Koi and Water Garden Club***)



## Membership Application

New Member

Renewal

Dues enclosed: \$20 per household, two adults (please do not mail cash)

Name/s: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Your E-mail address is important to us.

We prefer to send our newsletter out as an Adobe Acrobat PDF file. Adobe has a free reader available on their web site. \* Remember, Please do not enclose cash if you mail your dues.