



Charleston Showa Koi Club

Last meeting...

Our last meeting was at the home of Jim and Mary Leard. Jim talked on using an inverter to keep air to our pond if we have no power.



Next Meeting....

Our next meeting will be at the home of Chris Deer on Sunday April 11th at 2:00 with the pond tour meeting at 1:00.

Don't forget to bring a photo of your "grow out fish" with a ruler in the photo beside the fish!

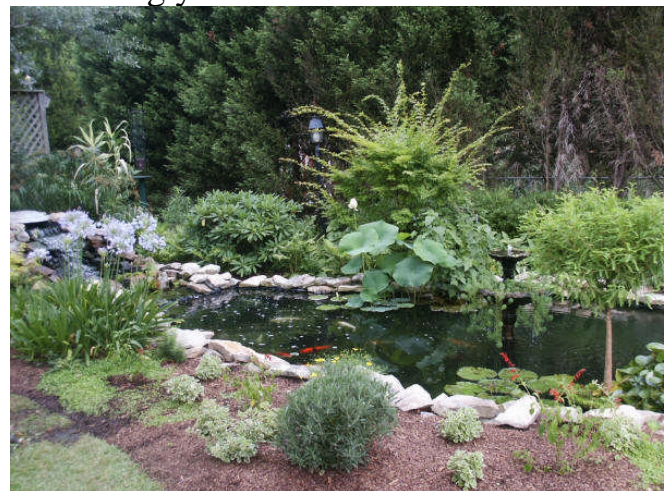
Also this meeting is going to be a "plant swap" so if you have any plants you want to get rid of just bring them and maybe somebody would like to have them and maybe they will bring something you would like to have.

Welcome new members...

Welcome Beth and Ken Slaughter from Mt. Pleasant and David Gramenski from Goose Creek.

Thank you...

Linda presented a check to the Charleston Area Therapeutic Riding for 1200.00 as voted on at our last meeting and this is an email they sent to Linda for the club, All of us at CATR are tremendously grateful for the Showa Koi Club's generous and unexpected contribution to our program. Especially in the current economy, this significant gift makes quite a difference in the life of children and adults with disabilities.



Pond tour update....

We ended up with 29 ponds. The tour will run from 9am to 4pm with the finale from 5pm to 7pm at the animal shelter on Remount Road. We need as many donations for the raffles as possible as well as gifts for the pond owners. We will have a signup sheet for donations as well as salads, etc., for the finale at the April meeting. Please help by signing up for whatever you can, and plan on attending the finale. The more club members we have there, the easier it will be for everyone.

Don't forget your spring cleaning, especially if your pond is on the tour! You don't want a spawn the morning of the tour so go ahead and clean your pond, repot plants and general maintenance.

Calendar of events...

April 11 - Middle Ga Show
April 11 - Chris Deer **Photo for grow out**
May 16 - Cindy and Charlie **3rd Sunday**
May 23 - AKCA seminar
June 12 - Pond Tour
June 13 - Trish and Kathy **Photo for grow out**
July 11 - Richard and Debbie
Aug. 8 - open
Sept. 12 - Lotus Land Koi Farm
Oct. 10 - Ralph and Sue **Photo for grow out**
Nov. 14 - Open
Dec. - 14th - Open
Meeting times and places may be subject to change.

The Kodama Class in Raleigh

By Robert Lewis

For those of you who don't know who Mr. Kodama is, he has been a koi dealer for over 40 years and is regarded as one of the most if not the most knowledgeable koi person in the world. He is the author of KOKUGYO (the black book as we know it) and KOKUGYO Vol. 2 (the red book). The black and red book is the books that many koi judges use as reference when getting ready for a show. Mr.

Kodama also owns Kodama Koi Farm in Hawaii

www.kodamakoifarm.com/lover/start.php

The class was on what you should look for when picking your new koi. You may think it is easy however I can assure you picking a good koi is a very difficult task. Anyway Johnna, Cindy, Penny and I found the class very interesting. Mr. Kodama dose not speak English so his son Taro translated for us. The class was for the most part was Q and A. He started the class with a talk on Kohakus and then after lunch moved to Sanke, and then Sunday we started with Showa and after lunch Utsuri. Mr. Kodama would talk for awhile then open the floor for questions which he did his best to answer. There was a time or two that the translation got lost, but for the most part it went well. The class was \$200 and well worth every penny of it. Mr. Kodama is one of the best speakers I have ever seen. As I said, he speaks no English and knows we didn't speak Japanese; however that didn't slow him down at all. When you asked a question he looked straight at you and answered, it was up to Taro to keep up with the translating.

At the end of the class we all received a Kodama Koi Academy Certificate filled out and signed by Mr. Kodama as well as 4 CDs Kohaku, Showa, Sanke and Utsuri. I would like to thank Dan Phillips President of the NC Koi and Water Garden Society for arranging this event and the North Carolina State University of Veterinarian Medicine for allowing us to use their facility. I can only say if you didn't go you missed a good one.



Members....

Our condolences and prayers go out to the Zito family with the passing of Dom. More information on Dom's arrangements may be found by to the James A. McAlister Funeral Home website below.

<http://www.charlestonfunerals.com/sitemaker/sites/JamesA1/obit.cgi?user=190265Zito>

Water Quality....A Balancing Act By Cindy Coombs

Alkalinity (kH) is the measure of the amounts of carbonate ($\text{CO}_3^{=}$) and bicarbonate (HCO_3^-) ions in the pond. Alkalinity is related to the buffering capacity, or pH stability of the pond. Alkalinity levels of 50 to 170 are the values generally recommended. Note: maintaining pond water alkalinity is probably the most important thing you can do for the health of the pond since all fish and filter bacteria need a stable pH to survive.

Ph is a measurement of whether the water is acidic or alkaline. Ph is measured on a scale ranging from 1 to 14 with 7.0 being neutral. Anything below 7 is considered acidic and anything above 7 is alkaline. The ideal ph for koi and filter bacteria is around 7.4, but they will do fine in lower or higher pH water as long as it is STABLE!! A stable pH is much more important than the actual pH number. PH is stabilized by Alkalinity levels, so maintaining good Alkalinity is critical. If you notice large numbers of fish acting differently (flashing and jumping) especially after a heavy rain, suspect pH issues.

If your kH drops low enough to allow the pH to crash (sudden drop in pH), the result is disastrous. Fish will begin to die in large numbers and filter bacteria will begin to die, causing ammonia levels to suddenly rise. Your first instinct will be quickly add something in the pond to rapidly raise the pH (like baking soda). But wait....first you must add ammonia binder to the pond so that the ammonia will not harm the fish. Ammonia levels are much more toxic at higher pH levels. The rising ammonia has not harmed the fish yet because the pH is low. As an example, let's assume the water temperature is 70°. Koi can tolerate ammonia levels of 1 ppm for a day or so if the pH was 7. At a pH of 6.0, they could survive an ammonia reading as high as 10! But if you put baking soda in the pond to quickly raise the pH up to 8, an ammonia reading of just 0.1 can be dangerous. After a pH crash, your filter must start building new bacteria so plan on controlling ammonia and nitrites as if the filter was brand new.

Ammonia is naturally produced by the koi as waste. Most of it is from their gills around (70%) and their kidneys produce the rest. A biological filter contains two forms of beneficial bacteria. The first bacteria that are formed will remove the ammonia by turning it into nitrites. A new filter it will take approximately 2 weeks (with fish present) for enough of these beneficial bacteria to develop to be keep the ammonia levels down. During this time, keep stocking levels low and do not feed the fish. Several weeks with no food will not hurt them. Maintain acceptable ammonia levels through water changes and the use of ammonia binders. Fish suffering from ammonia levels will usually sit in the bottom with their fins clamped to their sides. Their fins are usually red and some fine red veining might be visible on their bodies.

Nitrites are produced by the bacteria in your biological filter as it removes the ammonia. Like ammonia, nitrites are also toxic to your koi. The best way to remove nitrites from your pond is also with a good biological filter. After the ammonia bacteria build up in the filter, another bacteria begins to form that will change the nitrites into nitrates, which are relatively harmless. This bacterium is more fragile than the ammonia bacteria and takes longer to get established. When installing a new filter, it will usually take up to 6 weeks after the fish are added to the pond for the beneficial bacteria that controls nitrites to develop to the point where it will keep the nitrite levels under control. If nitrites are allowed to form in the pond, nitrogen will begin to replace the oxygen in the koi's blood causing organ damage and death. Small koi are affected more quickly than large koi. Nitrite levels should always be below 0.25 ppm. If the ppm increases to above 0.25 ppm, increase aeration, stop feeding and add 1 pound of salt per 100 gallons. At 1.0 to 2.0 ppm, conduct a 25% water change and add 2 pounds of salt for each 100 gallons changed out. For a level greater than 2 ppm, conduct a 50% water change and add 3 pounds of salt per hundred gallons of changed water. If levels get above 4.0 and cannot be controlled, the fish must be moved. Signs of nitrogen poisoning is the same as for low oxygen, since the fish are starving for oxygen due to the nitrogen in their blood, however small fish are affected before the larger fish.

Oxygen levels in a pond are very important to the overall health of the koi. It is important to understand that plants and algae produce oxygen during the day

light hours. At night, however, the whole process is reversed and plants and algae actually consume oxygen. So do not assume plants will oxygenate your pond well enough for your koi. Koi need oxygen levels of 5 ppm to 11 ppm. At oxygen levels below 5ppm and fish begin to die, especially the larger ones. Most koi ponds need aeration of some sort. An air pump with air stones is the best method although a good flowing waterfall may be sufficient for smaller sized koi. Fish that are starving for oxygen will gather in under the waterfalls or in moving water (high oxygen areas). If large fish in the pond appear to be suffocating but small fish are fine, suspect an oxygen problem. If the small fish are suffocating before the large ones, suspect nitrite problems (since nitrite problems affect small fish more quickly).

Another Chemical balancing act is going on in your koi's transport bag as he is being shipped or moved to and from koi shows. Even though the koi is fasted prior to shipping to decrease the amount of waste it produces, the fish is still excreting ammonia into the water. The fish is breathing in oxygen and breathing out carbon dioxide and ammonia. The trapped carbon dioxide lowers the pH of the water and makes the rising ammonia levels less toxic. As soon as the bag is opened, fresh air rushes in and the chemical reaction that protected the fish in transit is interrupted. The water chemistry begins to shift and the water quickly starts to become very toxic. For that reason, as soon as the bag is opened, the fish must be removed. Don't try to mix pond water in to help acclimate the fish. The addition of your pond water will make the pH rise quickly and the fish could succumb to the ammonia levels.

Library....

If you have anything from the library please contact Chuck, don't make him name names.