



# Charleston Showa Koi Club

## Last meeting...

Linda Lewis

It was good to see a lot of folks back at the club meeting. We do miss you when you are not there. Many familiar faces were back for the meeting. This pond is still under construction and was the topic of the meeting. We discussed koi ponds and water gardens with emphasis on how to make this pond a very good koi pond. We did this at the request of the pond owners of course. I think they have many new ideas to use and think about as they construct their new pond. I'm looking forward to visiting this pond on the pond tour. Hope to see you there in May.



## Min. from the 12/9/10 meeting....

Rudy Lutge

Cindy called the meeting to order at 2:30pm. She then welcomed all new members and old members who had not been there in awhile. She then

thanked Kathy and Dave for having this month's meeting at their house. She then mentioned that the minutes from last month is in the newsletter. She then mention that next month's meeting will be on the 2nd Sunday and and it will be at Lorna and Butch's house. Also if anyone has any pond tour signs please let Rudy know because he is in charge of the signs. Ralph then gave a financial report. He also mentioned that he is now collecting dues for 2011. Family is \$55.00 and single is \$45.00. This includes a year subscription to KOI USA. Kathy then gave a pond tour report. She said that we have 26 ponds and that we are still looking for advertisers for the booklet. The pond tour committee bought 5000 postcards for pond members to pass out, so if anyone needs some please, email her or Trish. She said that we will be getting posters that look like the booklet. She then mentioned that we are looking to see how much it will cost to advertise in the local newspapers. She also mentioned that if anyone has any advertising ideas to let her or Trish know. At this time we talked about several of those ideas. Cindy then mentioned that we will have a guest speaker from Purdin Koi Ponds to speak at our September meeting. Also she talked about having someone in the spring. At this time time, we talked about how to spend the clubs money that would benefit all. The Orlando show was mentioned and buying good quality fish for members. Cindy then said that if everyone would think how they would like the clubs money spent and come back next meeting with their ideas. Cindy then asked if there was any more business to discuss and Jim

mentioned about the metal herons he got from Hyman's on James Island that worked for him in getting rid of the real herons that was after his fish. Cindy final said that she would be discussing the difference between a koi pond and a water garden. She then adjourned the meeting at 2:50pm.

## Treasurer Report Ralph Owens

Treasurers Report 2008	
<b>Starting Balance Jan 1, 2008</b>	<b>8030.79</b>
<b>INCOME</b>	
Membership Dues	1735.00
Pond Tour Income	5132.00
Grow out Fish	260.00
Other	31.00
<b>Total Income</b>	<b>7158.00</b>
<b>EXPENSES</b>	
Trailer work	1038.00
Flowers and memorial donations	50.00
AKCA Dues	
Pond Tour Expenses	1889.13
Donation to Charleston Animal Society	1750.00
Donation to Disabled Riding	1250.00
Donation to Food Bank	300.00
Speakers	35.97
Meeting Incidentals	150.00
AKCA Seminar	1200.00
Grow out Prize	195.00
Library	272.00
Bank Charges	19.50
<b>Total Expenses</b>	<b>8149.60</b>
<b>Closing Balance December 31, 2008</b>	<b>7039.19</b>

## Membership Dues Procedure Ralph Owens

To support the AKCA the club has voted to include a subscription to Koi USA as part of the club membership. This means that the dues will be increased by \$20 to:

**\$45 for individuals**  
**\$55 for family membership**

At the end of March, I will send a check and the details of all members to Koi USA who will either:

Arrange a subscription for each member, or  
Add an additional year to existing subscriptions.

If you are already a subscriber please advise me when you pay your membership dues and if possible your subscription number.

## Airlift Pond Cindy Coombs

A new pond starts with a vision, a dream. I dreamed of lowering my electric bill! I have three DIY ponds in my yard already and running all of those big water pumps was not cheap. I knew my largest pond needed some renovations and improvements, and decided that while I was working on it, I'd like to see if there was a way to convert it to run on air lifts instead of the two big water pumps that are on that pond. So I began research air lifts. Simply explained, air lifts use air to move water. Air is introduced into the return pipe at a dept of 5' or so. As the air bubble rises, it pushes water ahead of it. After months of research, I had a pretty good understanding of air lift theory and decided the best way to REALLY learn about air lifts was to build a prototype pond with a functioning airlift pump. It was time to get started on another DIY project.

Space in my back yard was already pretty limited. When I build this yard, I leveled it up and built a retaining wall. This made it quite easy to gravity flow all of my pond to filters hidden behind the retaining wall. But it also meant that I only had a corner to squeeze the new pond in. And there was no way to get digging equipment in the yard so the digging would have to be by hand. But it was the most logical place to locate the pond so I grabbed a shovel and started digging.

The hole ended up being 5' deep. I poured a foundation for the wall and dry stacked

the blocks. Each core has vertical rebar in it and there is horizontal rebar on every 3<sup>rd</sup> course and on the top. Then I filled each core with concrete. I could not get a concrete truck in that area so I mixed the concrete in my trusty 30 year old mixer and carried it to the wall in 5 gallon buckets. I adhered Styrofoam to the inside and top edge to act as underlayment, padding for the liner. The liner was laid in and attached to the top of the block wall using large washers and concrete screws. Then I built the rock wall in front of the block wall to make the pond look formal, yet rustic at the same time. The final depth of the water is 7' at the bottom drain and the total volume is 4660 gallons.

Now it was time to complete the filtration. The skimmer has a 3" line leading from it to a 55 gallon barrel filter that contains mataala. The pond's overflow pipe is located in this barrel, and excess water is drained off to the woods. There is an 1800 gph mag drive pump located in this barrel that feeds a shower filter. The shower filter is loaded with bio balls and oyster shells. My well water has a very low pH and no measurable alkalinity and the oyster shells help to stabilize my pH. They are replaced yearly. The shower filter feeds the pond's small waterfall, located in the back corner of the pond. During summer months, a small bit of water will be diverted from the shower filter supply to run the bronze swan spitter on top of the waterfalls.

The 4" aerated bottom drain line goes to a 275 gallon tote tank. There is a leaf net inside the barrel where the bottom drain line enters, but this is only used in the fall to capture the leaves from a near-by oak tree. Inside the tote there is a 55 gallon barrel. The barrel has two rows of 1"

holes located around the top section. Water can only continue on to the fluidized filter by entering the barrel at the top of the water. This helps insure the heavier solids don't enter. There are two mataala rounds inside the barrel as well. A clean-out drain for this barrel dumps into the tote. Under the mataala mats are two 4" pipes that carry water to the fluidized Kaldnes filter. A single 4" pipe leaves the fluidized bed and drops down to 5' below water level. This pipe serves as the airlift header. Four 2" pipes were inserted into the 4" pipe using uniseals. Each of these 2" pipes has two 1/8" mnpt to 1/4" barb air fitting in the side, and this is where the air is introduced into the air lift header. I later discovered that the system worked much better and moved more water if I pinched off one of these air lines on each pipe, so now each pipe uses a single air line. These four pipes rise up and enter the side of a 55 gallon barrel right at the water level. Two 4" pipes exit this barrel 12" below water level and return water to the pond. There are stainless steel guards on these pipes where they enter the pond so fish can't attempt to swim into the pipes.

The air pump that supplies the air to the airlift is a Dolphin AP-150 diaphragm pump (140 watts). When I turned on the air pump for the first time, I was shocked to find I had a flow rate of over 9000 gph. This flow was way too fast for the size of the settling tank. The drawdown in the first tank and the head in the last tank confirmed my measurements. There was just too much flow. So I diverted some of the air from the air pump to the fluidized bed and slowed down the flow rate back to the pond to 5400 gph.

The Kaldnes that I filled the fluidized bed with came from one of my other ponds. Earlier in the summer, I added a couple extra cubic feet of K1 to my other filters so that the new pond would be ready for fish sooner. Currently the new pond has only two koi in it, but 3 more will be added in late spring for a final capacity of 5.

I learned a lot about airlift through the construction of this prototype pond. Next winter, I plan to rebuild my big pond and change all of the filtration (except for the skimmer/shower filter circuit) to air lifts. While this new pond exceeded my expectations and I am thrilled with the outcome, air lifts are not for everyone or every situation. It worked for my situation beautifully because I only wanted to move the water, not lift it up. Once you understand the theory behind airlifts and the limitations, it is possible to apply that information to a koi pond and save a lot of money on your power bill.



## Calendar of events...

### 2011

Feb. 13 Butch Abrams

March 20 Mary and Jim Leard

Apr. 10 Grant and Penny Patton

May 8

June 12

July 10

Aug. 14

Sept. 17 Guest speaker-Bill McGurk from  
Purdin Farms

Oct. 9

Nov. 13

Dec. 11

Meeting times and places may be subject to change.