

ZNA Potomac News

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Mud pond harvest at Quality Koi

Presidents Message

Hello ZNA Potomac Members,

Well the season is changing rapidly around my pond. The net has gone back over the top to keep out the windblown leaves and debris, and the fish are not as happy as during the summer months. The temperature of the water is decreasing with every frosty evening. Koi food is getting rebagged and vacuum-sealed for the long wait till spring. Winterizing the pond is not something that I look forward to each year. My friends in Florida and California don't have to experience the down time that we do, but after seeing the ponds and hearing the stories of pond keepers in Buffalo, NY, I am not complaining that much. Come on spring!

The October Pond Tour was great. We had 20 members who toured three ponds on 10/22/2006. Many thanks to Chuck Wilson, Glen Crispell, and Chuck Lockhart for allowing us to visit and trample through their yards. Every member I spoke to that day

came away with ideas about their own ponds, or wishes to learn more about water quality. Also thanks to Vienna Aquarium and Chris for arranging the day and for the hospitality at the shop. Everyone should visit Vienna Aquarium again and support our sponsor.

The next item on the calendar is the December 3 meeting at Karen Miller's in Glenwood, Md. We are obtaining directions which we will include in the newsletter and on the website. Please come and bring an unwrapped new toy for the Toys for Tots program. We were challenged by Northern California ZNA to see who can donate the most toys. Come and help us help the children.

As usual, let me or any of the officers know how we can serve your needs better. This is your club. I want and need sug-

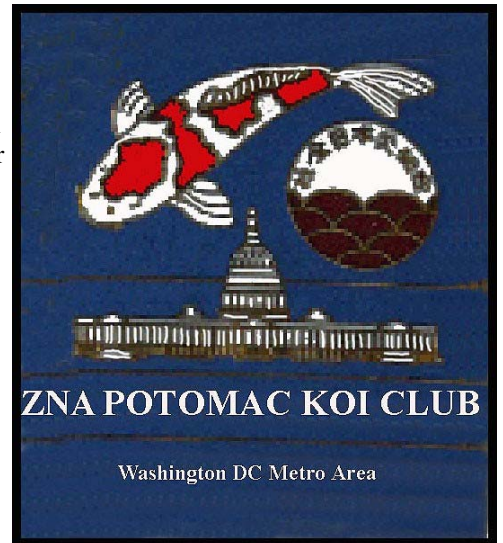
gestions for topics for the coming year. We are working on a bus trip to Quality Koi in NJ for February or March. Let us know what else we can do.

Together we make a difference,

Mike



Kumonryu tosai



Next Meeting/ December Holiday Potluck. See page 3 for more details!!

October Meeting Highlights

The October meeting of ZNA Potomac was one not to be missed! It was a gorgeous fall day as we started out at Vienna Aquarium. While there we spent time browsing the large selection on koi and koi products while indulging on brownies and cookies. We then left there for a short trip over to Chuck Wilson's house to view his amazing 60,000 gallon pond. He had two ponds with waterfalls and stream beds with amazing rock landscaping throughout. Many different varieties and sizes of koi were seen at this pond! After that we were off to view Glen Crispell's 4400 gallon pond. Although this pond was more modest in size it was very beautifully constructed and maintained. The koi as always were a pleasure to view. Scheduling was tight so we were then off to Chuck Lockhart's to view the final pond of the day. This pond was very nice and also incorporated waterfalls with rock edging. Once again we were treated to some very nice koi. Then we moved on to Meadowlark Gardens where we toured the grounds to see if it would be a good place to host our 2007 Koi Show. After the tour we went to the picnic area and had some fantastic potluck food that was supplied by the membership. While we were all eating Mike Frady, club president, discussed upcoming events which include the December Holiday Party in which we will be collecting Toy for Tots. He also discussed a trip in February to Quality Koi/Nisei Koi Farms to view their operation. Another item we discussed was setting up a committee of volunteers to help out when fellow ponders have problems with their ponds and need our help. There are many more photos of this event at our website in the album section.

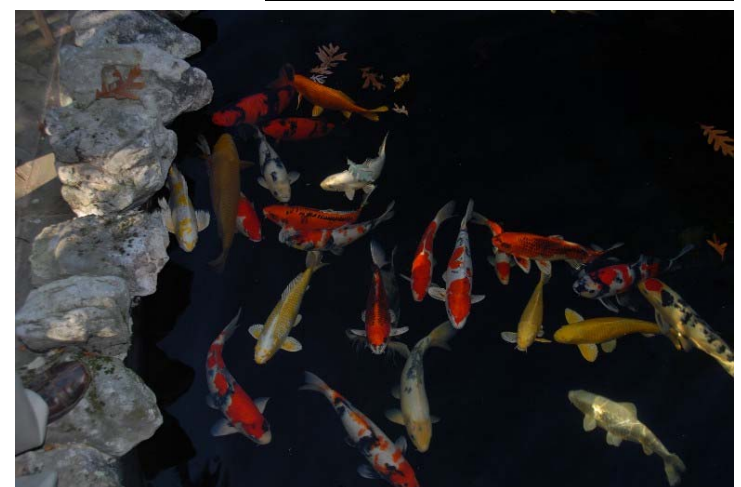
[Http://www.znapotomac.org](http://www.znapotomac.org)



Chuck Wilson's Pond



Glen Crispell's Pond



Chuck Lockhart's Koi

[Http://www.znapotomac.org](http://www.znapotomac.org)

December Holiday Party Potluck

12/3/06 The ZNA Potomac's December Meeting and Holiday Party! This event will be on Dec 3 at 1pm at Karen Miller's house in Glenwood Maryland. This will be our end of the year holiday event! This is a potluck so please bring a dish. Drinks and paper products will be provided. We will be collecting new, unwrapped toys to donate to Toys for Tots. Please bring at least one toy to help the needy children. If you have friends and neighbors that would like to donate feel free to bring those toys as well.



Karen Miller
14515 MacClintock Ct.
Glenwood, MD 21738

Can take I70 to Rt 97 (Georgia Ave) to left onto MacClintock Dr to left onto MacClintock Ct. Can take any main road (95, 29, BWPkway, to 32 west to Left at light onto Burntwoods Rd. Go couple miles, and just after the Lutheran church which is painted blue on the left, you must yield to traffic to bare left onto shady lane. (If you have gone around the sharp right turn, you missed shady Ln.) Take first right onto MacClintock Dr. and first right onto MacClintock Ct. We are house on left after the vacant lot. You can get a free map at <http://www.mapquest.com>

October Meeting Highlights cont.



Some of the koi for sale at Vienna Aquarium



ZNA Potomac members enjoying potluck at Meadowlark

Winter Water Quality

One of the major points we need to make to pond owners is to check water quality over the winter months routinely as this can tell them how the pond is doing and what needs to be done to head off or fix problems. This should happen whether the filter is running or not. Here are some key points to water quality in winter:

1. Expect levels of ammonia in the water. Even though the fish are not eating, ammonia is being produced by respiration and with no biological activity to speak of (unless the filters are running), ammonia will accumulate. However, the cold water makes it less toxic and almost harmless during the winter.
2. Expect low levels of nitrites. Low levels of nitrites will not adversely affect the fish due to low uptake potential. However, if there is concern, raising the salt level to .08 to .1% will protect the fish and not affect the water temperature.
3. Test for KH levels routinely. Photosynthesis and other biologic activity in the pond are depleting the KH levels continually and as such, they will need to be replenished during the winter months.
4. Test the pH often, getting both early morning and late afternoon readings for comparison. The goal is hold the pH stable at whatever level is natural for the pond (assuming the KH levels are correct).
5. ORP readings can quickly tell us the overall condition of the pond and from those readings we can react accordingly, including water changes.
6. Do not be afraid to change water in the dead of winter. Remember that significant evaporation has occurred (especially if there is an ice layer) and the water levels need to be replenished and refreshed. Add the water more slowly than usual to allow for temperature changes and use dechlorinators as needed.
7. Significant thawing and heavy snow will have the same effect on a pond as heavy rain. Typically, snow (like rain) is acidic and can affect the pH of the pond unless the KH levels are properly maintained.
8. Use a good in-water digital water thermometer to keep track of the water temperatures at the bottom of the pond.
9. Aerate and circulate the water to help release the gases in the pond and refresh the water.



By Richard Carlson

ZNA Potomac Website News!!!

This past month I have added a membership application and updated the album section with photos from the last two meetings. I hope you will enjoy the photo tour of October's pond tour as we saw some very nice ponds. The cost of printing this newsletter keeps us from being able to show you as many photos as we would like but since we have a website with lots of space you will find many more photos online. For this upcoming month I will be adding a special "Newsletter Web Extras" section. Since this newsletter is printed it would be difficult for you to use the links so go to www.znapotomac.org. The links will be found by clicking on the month of the newsletter under the newsletter section on our site. For each newsletter I will comb a couple of the koi web forums and post links to various topics of discussion on koi. The first two links deal with koi health related issues and the second two discuss koi appreciation matters. The first link is a link to a discussion on how to treat a koi that survived a heron attack. This post hit home with me as it was written after one of my koi survived an attack. The second health link is a post on the 12 warning signs that your koi has health problems. The first appreciation link deals with koi body conformation. The second deals with what to look for when buying a kohaku. I hope everyone finds these useful links. A couple tips on using forums. None of the links I post will be to spam sites or anything like that so please go ahead and create an account at these sites as they are free and it is the only way to view many of the photos at these sites. If you are an AOL user I recommend you use Internet Explorer when visiting koi sites as many of the features on these sites do not work with the AOL browser. Thanks and I'll see you on the web!

~Jim North

Would you like your pond listed at our clubs website? Please email me the information below with three digital photos of your pond and koi and I will list them for you on our website.

Bio

Keeping koi since:
Introduction to koi:
Favorite Variety:
Why:

Pond Info

Size:
Number of koi:
Plants:
Liner:
Filtration:
Future Plans:
Personal Koi web page:
 Email submissions to jnorth@znapotomac.org

Would you like to write an article for the newsletter? Is there a topic you would like to see an article on? Do you have any general questions or comments on the newsletter or website? If so, then please email me at:

[Jnorth@znapotomac.org](mailto:jnorth@znapotomac.org)



Feeding in Cold Waters and the Magic Numbers

As our ponds begin to significantly cool down, we need to understand what the change in water temperature does to the ecology of the pond and the physiological needs of the fish. And of course, this translates into how and what we feed our fish.

As the water temperature at mid-depth of the pond begins to drop and hold at lower readings, we need to pay special attention to what is happening to the ecology of our ponds. The first magic number we need to look for is 62 degrees F. At 62 degrees, the activity of the nitrosomonas bacteria begins to reduce primarily as the fish begin to slow down and produce less ammonia through respiration (less ammonia, less nitrogen processing). While there is some debate on which bacteria actually effects which biological filtration processes, for the purposes of this course, we will use nitrosomonas and nitrobacter as the principle nitrifying bacteria. The net effect is that the biological bacteria colony in the filter will reduce in proportion to the amount of nitrogen food available to colony.

Also at 62 degrees, we see a significant dip in the koi's immune system's ability to fight off bacterial invasions. This is where the fish start becoming increasingly vulnerable to ulcer and other bacterial infections. If the fish are strong and the pond is healthy (well cleaned), the owner should not have problems.

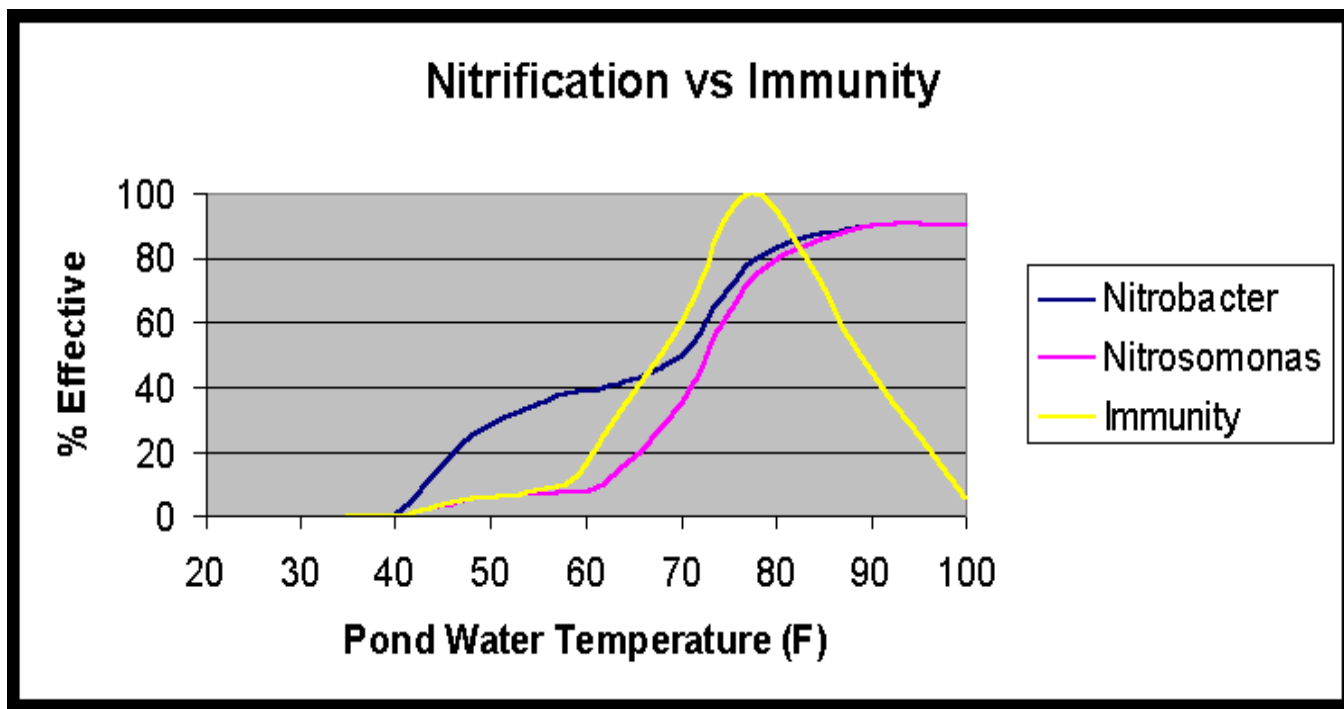
The next important temperature mark is 55 degrees F. At 55 degrees, the nitrifying bacteria in those ponds where the filters have been shut down will start to die off although they will not be completely gone until about 42 degrees F. While the fish are still producing ammonia primarily through respiration, we need to consider methods of reducing ammonia output and here are some recommendations:

First, we need to change the diets of our fish to a food with lower protein content. Normal summer-type koi feed has protein levels in the range of 35-40% (or higher) depending on the type of food used. For colder water feeding, we need to switch to a food with a lower protein content, somewhere in the range of 30-32%. The reason? It is protein content in food that is a major contributor to ammonia production by the fish. By lowering the protein levels in the food, we thereby lower the ammonia output. It is important to note that 65% of the ammonia produced is not from feeding but a result of normal respiration. Thus it is important to make sure we control the 35% that we can.

Next, as the water temperatures drop into the 55-degree range, the koi's metabolism begins to slow and its need for nutrition reduces as well. This slowing of the koi's nutritional needs also allows the owners to reduce the amount of food provided to the fish. You will begin to notice that the koi are less active and they begin to form groups at the bottom. The exception is during times when the sun warms the pond and then they like to be near the warmer surface. Occasionally the fish will graze on the algae growing on the sides and bottom of the pond and seem quite content to do nothing more.

The charts on the next page illustrate a correlation of water temperature, immune system condition and nitrifying bacteria condition. This is a compilation of accepted data from a number of published sources. In the first chart, the effects of pond water temperature are shown against the activity levels of the nitrifying bacteria (nitrosomonas and nitrobacter) where the filter is not operational. Also note the range where the koi's immune system is most effective. The increased activity of the nitrifying bacteria increases the quality of the water as harmful ammonia and nitrites are removed from the water. This increase in water quality then supports the koi's ability to build and maintain its immune system. It looks like Mother Nature knew what she was doing when she developed this part of the ecosystem

Feeding in Cold Waters and the Magic Numbers cont.



For many years, Cheerios was recommended if the owner had to feed the fish something (guilt complex) and the reason for using Cheerios was that it was very low (like zero) in protein. But as we have learned, Cheerios is high in carbohydrates and as such, are not good for fish in cold water conditions where they cannot burn off the carbohydrates effectively. A lower protein fish food is a much better choice for cold water feeding IF it must be done at all.

Another thing to consider regarding feeding is that owners should NOT “pack it on” during the fall as the fish’s natural storage and processing systems provide for sufficient nutrition all winter long. Keep in mind the fish are not in torpor and so their processing nutrition requirements are minimal during cold water times.

At 50 degrees F, stop feeding the fish altogether. At this point the fish’s much lower metabolism will not allow proper processing of food in the gut. Koi, unlike most animals, do not have stomachs and so all food is processed in the gut. With a slower metabolism, the food moves through the gut slower and the body’s need for nutrients is reduced as well, so the net effect is that the food is not processed properly. If overfeeding during cold weather occurs, there is a real chance that the food will spoil in the gut and cause significant damage to the fish intestinal tract and quite possibly kill the fish.

And finally, at 40 degrees F, all nitrobacter activity in the pond ceases if the filters are not running. If the owner plans on shutting down their filters for the winter, this is a good time to do it. When the pond owner actually shuts down the pumps and filters is a call only the owner can make, but the overriding concern is freezing of the plumbing and the loss of a pump, filter, or worse yet - the draining of the pond from a ruptured water line.

By Richard Carlson



Gin Rin Asagi



Classified Section

Do you have something pond or koi related you would like to sell? List it here for the low price of \$5. Add will run until it sells! For ZNA Potomac Members only. *Thanks!*

GENKI NISHIKIGOI  錦鯉
Direct Importer & Distributor of Quality Japanese Koi

 
Call us: (408) 239-1018
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