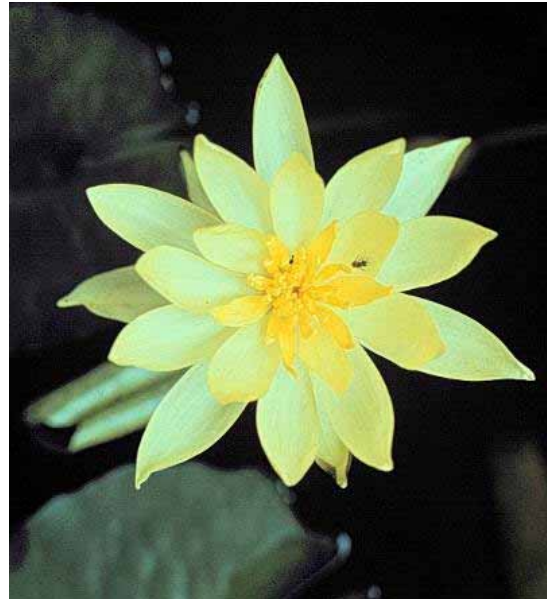




## Dayblooming Waterlilies: Old and New Favorites



***N. Colorado*** (hardy day bloomer)  
Flowers: salmon orange coloration; class it as a medium sized lily; excellent bloomer; vigorous growth; long season.



***N. Mexicana*** (hardy day bloomer)  
Flowers: Yellow opening only in the afternoon. FL native with tropical tendencies; very vigorous grower; long season.



***N. Panama Pacific*** (tropical day bloomer)  
Flowers: Viviparous purple/pink; takes lower light and some cold; good for smaller water gardens. A prolific bloomer and definite winner since 1914.



***N. Albert Greenberg*** (tropical day bloomer) Flowers: Sunset colored; mottled leaves; excellent bloomer; long season.

# Genesee Valley Pond & Koi Club Newsletter

## "Wet -n- Dry" "News -n- Views"

I think that last month's meeting was a great success. The enthusiasm of Michelle Jones-Hamm for rock gardening and her knowledge of the various design systems and plant materials for these special conditions was very helpful and informative. While she modified her presentation to reflect the use of regular soils and planting pockets versus the various grit, stone and screen rock garden soil materials, the approach and demonstration were more applicable to what might work around our ponds, streams and waterfalls. The demonstration of how elevation and flow of the terrain can greatly affect the aesthetics of the garden plan, tied in nicely with the concepts of making our ponds and streams appear more naturalistic and could help to integrate our water features into the surrounding gardens and terrain.

### June Activities

Our meeting on June 2nd will feature a video presentation on "Koi Classification" or "Garden Pond Basics"

June 3 and 4 will find us at Lily-Fest at Bergen Water Gardens. We will have a display during the fest to promote the club and answer questions about our ponds and fish. On Sunday, we will be holding our major fund raising event with the plant and product auction at about 2:00 PM. We wish to thank Ray "Kingfish" Lucas and the companies for which he is a spokesman and Larry Nau for their donation of their time, space and materials to make all of this possible.

We would appreciate your support in this event not only by your attendance but if possible through your

donations to the plant auction and also through your active participation in the auction process. Remember, the funds from the auction and raffles are the source for our speaker and educational materials funds.

The preparations for the AKCA Seminars, "Koi Over Niagara" are progressing nicely from what we could see from helping to prepare the handout booklets as our first support effort on May 12th.

Our second opportunity to assist the Niagara Frontier Koi and Pond Club to make this venture a success will be by staffing the AKCA book sales area on Friday, June 23 and Saturday, June 24. We do have some volunteers but could always use more help. Therefore, if you are available and willing to help, please call Larry Hursh at 473-6276 so that we can finalize the schedules by June 16th. We may be able to set up some car pools if there is sufficient interest.

This is the first time that this event has been held in the our northeastern area. This is a great opportunity for all of us to learn more about our hobby through the many vendors that will be available to discuss their products and their effectiveness. We may also have an opportunity to talk to some of the speakers and gain more insight into this fascinating water world.

### July Activities

Please note that our July meeting has been rescheduled for the 14th to avoid interfering with vacation plans during the holiday week. Tentatively we are hoping to have a presentation on selecting Koi.

On Saturday, July 8, RCGC will be offering their Summer Garden Tour "Gardens of Lake Ontario II". This tour will feature gardens in the Ontario, Pultneyville and Sodus area. Again, the influence of the

lake should make for some very interesting garden views and plant selections.

The Niagara Frontier Pond Tour will be on Saturday, July 22nd. They will supply us with additional information shortly after the rush of hosting the AKCA seminar has been completed and they can return to their regular activities.

Brian Nagel has several volunteer hosts for our Pond tour and picnic on July 29th. We can use additional hosts for stops on our tour so please consider opening your garden as one of our stops. This is a progressive tour, so you can be a host as well as a participant in viewing the other ponds. If you are interested in being a host or need more information about what is involved, please call Brian Nagel at 385-0495 or Larry Hursh at 473-6276. Please call before June 21st so that we can finalize our plans and possibly have the maps and routes ready for the July newsletter.

We know that this may seem like a overload of tours, but they have always been enjoyable, inspiring and a good learning experience. This can best be summed up by a quote that I recently came across. "I never saw a garden from which I did not learn something"-- Russell-Page

### Member To Member

Maureen Lynch announced at the last meeting that she had an overabundance of small goldfish. She is willing to donate some of them to anyone who can provide them with a good home. She still has fish available, so if you are interested you can call her at home at 394-8201 or call her at her shop at 436-3299. You can make the necessary arrangements for pick-up or transfer when you talk to her.

We would also like to again thank

*(Continued on page 3)*

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the following supporters: Ray Lucas, Kingfish Services, Larry Nau, Bergen Water Gardens and Pet World. They have helped us through the past year with donations to our meeting raffles. We would also like to thank Jack Zelenz for the donation of the hypertufa trough that was the demonstration piece made during the April meeting.

## Color Enhancement

Now that our ponds are open and the fish are freely swimming, we can realistically consider offering them various foods for their health and growth. There are also foods that contain materials that can stimulate the development of clearer and more intense coloration.

Some foods contain colorants that alter the color of the food, but do little to improve the color of the fish. The true color enhancers are the ones that actually work on and with the fish to improve and maintain the color appearance of the fish. It is important to keep this difference in mind as you check the ingredients of the foods that you are buying. You want color enhancers not colorants.

These color enhancers are usually pigment based materials that are deposited in the skin to generate the various colors. There are four main groups of pigments that provide these colors. They are:

- Melanins for black/ brown
- Carotenoids for reds, yellows and oranges
- Pteridines also improves reds
- Purines provide reflective crystals to enhance color glow.

These pigments may be deposited singly or laid on top of one another to create an even more diverse range of colors.

Of the four pigment groups, the most effective ones are within the carotenoid group. Since the fish cannot produce them internally,

they must be provided through their diet. Unfortunately, the beta-carotene with which we are most familiar from our own diets, is not as readily utilized by the fish. The more effective carotenoids that are readily deposited in the skin of the fish are in the xanthophylls family which includes lutein, astaxanthin and zeaxanthin.

Some of the foods that are rich in carotenoids are shrimp meal, yeasts, paprika and marigold meal. There are some man-made carotenoids that are also included in some fish diet foods. The more complete basic foods will contain some of these color enhancers as well as some of the melanins and purines.

Koi may have a basic predisposition toward developing or in some cases losing color cells. The presence of these cells cannot be influenced by diet, but a good diet will improve the intensity and quality of the color that they contain. These colored or so called chromatophore cells are capable of delivering two types of color. The biochromes are the hosts for colors imparted by the colored pigments within the cells. The schematochromes are responsible for colors created by light reflected from mirror like crystals from the purines.

The different chromatophores are:

- Melanophores - black pigment (melanin)
- Erythrophores - red pigment
- Xanthophores - yellow pigment
- Leucophores & Iridophores - reflective purine crystals

The erythrophores and xanthophores are most likely implemented by diet, and they are best enhanced with color producing foods.

Koi can convert simpler carotenoids to astaxanthin and other key pigments. They can even take the zeaxanthin found in Spirulina and convert it to astaxanthin. Ingredients must, therefore, be selected accord-

ing to the ability of the fish to use or convert them to useable forms. The carotenoids and their simpler forms are then combined with lipids (oils) and deposited in the color cells.

Spirulina is another great color enhancer. They are blue-green algae that have long been used as an ingredient for improving coloration and health. They are commercially grown for use in human and animal feeds and are therefore readily available for inclusion in fish foods. Spirulina contains vitamins, minerals essential fatty acids, health boosters and of course the carotenoids. The indiscriminate use of Spirulina is not advisable, as it has the potential to cause toxicity at high concentrations.

There is a limit to how much color enhancement is possible. It can only be improved up to a certain point, beyond a certain level, it is just wasted. To avoid problems, most koi keepers feed a staple diet and possibly supplement it with a performance diet at certain times of the year for enhanced coloration.

The overall condition of the fish influences the quality of its colors. Stress alters the color. Dark areas may fade and blood vessels may become visible in white or light areas.

As with vitamins, pigments are sensitive to degradation if exposed to light, warmth and humidity. Store the food in a cool, dry, dark place. Choose the right foods and keep your fish in good condition.

Following this plan, you will be well on your way to optimizing and enhancing the color of your fish.

*The above information was based on an article presented by Rupert Bridges through the Tetra Information Center and in KOI USA*

## Foam

At the last meeting, several members remarked about the unusual

# Genesee Valley Pond & Koi Club Newsletter

amount of foam that they were seeing on their ponds this spring. The following summarizes some of the information that was published recently in various magazines on this topic.

The layer of foam where there are tons of bubbles and floating pond scum on the pond, are definite signs of trouble brewing. This foamy water problem can sneak up on many of us because we don't always know or notice the the initial warning signs.

One of the early warning signs is a discoloration of water that starts to look like a weak tea. If this color change is not addressed and some form of remedial action is not taken, foam may start to form on top of the water.

Basically, this foam is formed from air bubbles that are persistent and don't readily pop. They tend to clump together and form various size masses that lodge along the edges of the pond and near the waterfalls. They are capable of being scooped out by hand, but much more needs to be done to keep them from returning.

The discoloration and later the foam are usually caused by dissolved organic compounds. In general, these dissolved organics are classed together as proteins, but they also include sugars, pheromones and some organic acids.

These proteins come from a wide variety of sources. They may come from algae, pond additives, fish food, the remains of hatched eggs, run-off and even from the excess of slime coat from stressed fish.

The discoloration of the water, if not treated or corrected, may also alter the color of your fish. The white areas of koi and goldfish may turn to a yellow off-white shade if too many proteins are present in the water.

Excess proteins can also effect water quality and fish health. Large

amounts of protein cause the beneficial bacteria to work overtime. This uses up more of the dissolved oxygen and also produces more ammonia. This can be a lethal combination if proper filtration, aeration and water turn-over rates are inadequate. Furthermore, the proteins that are dissolved in the water have actually displaced some of the oxygen that should be dissolved in those areas.

If you have foamy water don't panic. Start by doing a 10 to 20 % water change. This only reduces the protein concentration, but it makes it easier for the other cures to work. Next, add more beneficial bacteria, the extra boost will help clear the pond. Activated carbon or charcoal filters will also help to remove proteins.

It's also possible to treat proteins with potassium permanganate. This should be a last resort alternative, if the other programs do not work. The permanganate must be used with great caution, since it can kill the desirable materials in the pond.

Do not use salt. Salt will only add to the problem. The elevated salt levels will cause the fish to produce more slime coat, which will add to the protein load.

The long term cure requires the elimination of the source for the protein buildup. Some protein sources are:-algae and other forms of debris that are breaking down in the pond, -fish that have wounds or parasites will be producing extra slime coat, and chemical treatments that boost fish's slime coat can increase protein level, -fish food, especially color enhancers, are high protein and thus increase the amount of it in the pond water, -fish and other creatures spawning in the water also release proteins into the water, -empty shells after the eggs hatch are also a protein source. Proteins from mulches in the gardens around the pond can also seep pro-

tein into the pond. Fortunately, plant fertilizer isn't complex enough to increase protein in the pond water. Therefore, fertilize away, knowing that the vigorous plants will help to balance the pond.

Check your filtration system, the health of your fish and consider if you may have too many fish for your filtration system to handle. Another option to make sure that proteins are not a recurrent problem would be the installation of a protein skimmer also know as a foam fractionator. Although these are more effective in salt water, the results are still staggering in fresh water, if you can generate large quantities of tiny bubbles. They work by pumping water into a chamber that has a high concentration of small air bubbles. The protein clings to the outside of the bubbles like a skin until they reach the surface. The bubbles are directed into a separate chamber, where they can burst and the waste can be removed. Clean water from the fractionator is returned to the pond.



# Genesee Valley Pond & Koi Club Newsletter

## Board Members 2006

President: Larry Hursh  
Vice President: Bob Wheeler  
Secretary: Kathy Hursh  
Treasurer: John Roguski  
Pond Tour Chairperson: Brian Nagel  
Refreshments: Yvonne Wheeler and Kathy Hursh  
Newsletter Editors: Hursh, James, and Nau families  
Webmaster: Norm James - gvpakc@attglobal.net

## Purpose of the Club

- To promote, create and enlarge the hobby of keeping, breeding, appreciating and exhibiting Koi and goldfish.
- To promote and appreciate the hobby of Water Gardening.
- To disseminate information about Koi, goldfish and Water Gardening.
- To socialize and have fun.

We meet in a very friendly atmosphere at 7:00 pm, the first Friday of every month, at the Rochester Civic Garden Center (the Castle), 5 Castle Park, off Reservoir Ave., in Highland Park. Parking is free. Anyone interested in water gardening and/or Koi is welcome to join us. We ask that you consider joining the club after your third visit.

For more information call Larry H. (585) 473-6276 or e-mail lkhursh@aol.com or visit the club website at

**[www.ggw.org/gvpakc](http://www.ggw.org/gvpakc)**

## Calendar of Events

**June 3-4, 2006:** Bergen Water Garden LilyFest. Club display to explain club and answer questions. Plant and product auction at 2:00 PM on Sunday

**June 23-24:** GVPAKC to staff book sales booth at AKCA. Please volunteer if you can help.

**Please remember our commitment as a group to help support NFKPC at the AKCA Seminar in Buffalo, June 22-25, 2006**

**This is a first for our area and is a great opportunity to see great Koi and to learn more about them from the experts.**

**Plan your schedules now, so that we can not only staff the booksales area but attend some of the programs too.**

**July 8, 2006:** RCGC Garden Tour "Gardens of Lake Ontario II"

**July 14, 2006:** Note change of meeting date to avoid meeting during the holiday week.

**July 22, 2006:** NFKPC Pond Tour

**July 29, 2006:** GVPAKC Pond Tour and Picnic

**August 4, 2006:** Topic will be edible plants

**"Naturally Green" - A live gardening show every Saturday from 9-10 am on WYSL 1040 AM.**