



# Genesee Valley Pond & Koi Club Newsletter

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## Learning to Live with a Monster

It is believed that water hyacinths were first introduced into the United States at the World's Industrial and Cotton Centennial Exposition of 1884-1885 in Louisiana. A Florida visitor to the exposition apparently returned home with a few plants and subsequently released these invasive members of the pickerelweed family into the St. Johns River. From there, they spread to all of the Gulf Coast States.

Water hyacinths (*Eichhornia crassipes*) are commonly seen in local water gardens, where their invasive nature is held in check by the killing temperatures of New York winters. However, in their native tropical and sub-tropical habitats, these floating plants pose severe environmental and economic problems. Able to double their population every twelve days, they can form choking mats up to four feet thick that can weigh more than 200 tons per acre. The dense mats interfere with navigation, recreation, irrigation and power generation, as well as competitively excluding submersed and floating-leaved plants. Florida has been using mechanical controls, such as harvesting, for nearly 100 years, but it is expensive and ineffective for large-scale control. In recent years, biological control, using two weevil species and a moth, is showing good results keeping water hyacinths under maintenance control in many places.



Some communities have moved beyond trying to eradicate water hyacinths and are using them in sewage treatment plants, where they absorb and digest wastewater pollutants, converting sewage effluents into relatively clean water. Other uses include: harvesting the plants to make fertilizer; treating them with heat to produce consumer energy in the form of methane gas; and drying the plants to use as a high-protein animal feed.



Day 0



Day 120



Day 160



The above photos show how fast the water hyacinths can grow. Caution: While water hyacinths are thought to be cold-sensitive and unable to survive temperatures below 20 degrees Fahrenheit, **they should NEVER be deliberately introduced into lakes, rivers, streams, or drainage ditches.**

# Genesee Valley Pond & Koi Club Newsletter

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

The presentations by Steve Popen at last month's meeting were well received by the members present. The main theme was the cleaning of the pond as performed by a professional pond cleaning service. Steve is well versed in this since he is the coordinator of this operation and performs these tasks for Sunrise Aquatics.

Some of his points for cleaning our ponds and streams that I would like to share with you are summarized as follows.

- Use the hardy types of beneficial bacteria, not only in fall, but also in spring for filter start-up. The logic behind this seemed very reasonable. Even if your pond has survived the winter and the water quality appears to be quite good and clear, algae and other processes increase at lower temperatures and faster than the beneficial bacteria. The weather and temperatures are as variable as in the fall. The bacteria are trying to re-establish themselves and may be struggling to revive. Also, the pond temperature may drop during cold, cloudy periods to further reduce the bacterial activity. By adding new hardy, beneficial bacteria, the system has increased numbers and fresh strains of bacteria to boost this necessary activity. While this treatment may be more expensive than the regular bacteria, the long range benefits are worth it.
- Stir up any gravel or stones that are present in the pond and stream. This should also include the gravel covering potted plants as well as in filters or bog and beach areas. This

will release the trapped organic materials so that the bacteria can break them down and also for the filter to remove them. Power washing or scrubbing some of the surfaces may be necessary especially if string or hair algae has been a problem the previous seasons. Filter media that does not readily clean up should be replaced.

If you plan on moving your fish and/or plants to facilitate the cleaning process, use pond water to fill the temporary holding tanks. This will minimize the shock that could result from moving them. When moving the fish, especially larger koi, Steve strongly recommended the use of a sock net. For him the advantage of having these nets makes it possible for the fish to swim straight through the net for ease of release. This minimizes possible fish entanglement, better supports them during transfer, somewhat confines them to reduce jumping and makes release much easier.

- Use a transfer pump to pump out some of the water to facilitate the cleaning processes. By using an extension hose on the intake, some of the sediment and debris can be sucked up and removed from the bottom of the pond.

- With the volume of the pond reduced, check your fish for their overall condition. Remove any with noticeable health issues to a separate tank or holding area for treatment. They should be slightly easier to catch in the reduced volume and depth.

Check the pond edges for any settling, weakness, washout or failure. Rebuild and re-enforce as necessary.

- Prior to cleaning, calculate the amount of make-up water that may

be necessary to replenish losses. Precondition this water with a de-chlorinating product. Also, monitor the temperature of the water and try to keep it within +/- 5 degrees of the pond water. If additional water is required or if really large quantities are required, adjust the temperature as the water is added to the pond and proportionally add de-chlorinator with the water volume.

- While the pond is refilling, clean, trim and divide your plants. It is also a good time to fertilize them especially if you use fertilizer tablets. They can be pushed well down into the soil.

With the cleaning operations completed, the pond and stream filled to operating levels and the systems running, make a final check to verify that there are no plumbing leaks, no overflows and all cleaning drains are closed.

In his closing remarks, Steve mentioned some of the activities that he hopes to bring to the regional NAWGS chapter meetings. The meetings will be held on the last Monday of the month from June through September. They will be held at Gander Mountain on Jay Scutti Blvd in the Lodge room and start at 7:00 pm. Various topics and speakers will be scheduled as appropriate for the season. We will try to advise you of the meetings and topics as details become available.

The other big NAWGS event will be the nationwide Parade Of Ponds on July 9-10. The local chapter is hoping to have 20 or more local ponds that will be available for viewing. There is a charge for this tour but all of the proceeds will be donated to charity. Details to fol-

*(Continued on page 3)*

## Genesee Valley Pond & Koi Club Newsletter

low.

Saturday, May 28th is the date for the Proud Market Plant Sale at RCGC. It will start at 8:00 am and continues until the plants are sold (usually around noon). There will be a few vendors as well as donated plants from area gardeners.

A gentle reminder We will not be meeting on Friday, June 3rd. This month's meeting will be on Sunday, June 5th as part of LilyFest at 1:00 pm at Bergen Water Gardens. Our plant and product auction will follow the meeting. Ray Lucas will again be donating the products that he brings to help support our fund raising efforts.

Since LilyFest is our main recruitment effort and the auction is our main fund raising activity, please, support us in this venture. Again I'm asking for the loan of some mature specimen plants to help dress up our club display area. We need these not only to attract people to check us out but open the doors for us to answer questions about the club and the great potential that water gardening may have for them. If you enjoy your water garden and talking about it, consider coming out on Saturday or Sunday to help out at our display and talk to those stopping by about it.

So far we do not have many donated plants for the auction. I know that my plants are a little late in developing due to the colder weather. If you are going to divide or reduce the number of plants that you have in your pond, please consider donating them to us for the auction. Please call me at 473-6276 or e-mail me at [lkhursh@aol.com](mailto:lkhursh@aol.com) if you will volunteer your time or plants so that we can create a par-

tial list of volunteers and plants.

Our pond tour will be on Saturday, July 30, 2005. It may seem to be a long way off right now but please let us know if you would be willing to be one of the hosts for this year's event. We need time to set up the schedule and prepare the maps and directions for each stop. You can contact Larry Hursh at 473-6276 or Brian Nagel at 385-0495. We will be happy to answer any questions and try to put your mind at ease before we confirm your commitment. We would like to have a full schedule of ponds and will conclude the tour with our annual picnic. A tentative schedule for possible categories for the dish to pass might be:

A-H bring a dessert type dish

I-P bring a salad or vegetable dish

Q-Z bring an appetizer.

This may be adjusted at a later time depending on the families responding within the different categories.

A recent issue of *Water Garden News*, a trade publication, had an interesting article on fish scoliosis or bent back problems occurring in pond fish. The article was written by Pamela D. Govett, D.V.M. and this is a summary and extract of some of her information.

Arriving at the pond following a thunderstorm, you notice one or more of your fish swimming erratically and showing a distinct bent appearance. How could this happen?

This could be a form of scoliosis and yes, lightning has been suspected of being a contributing factor. The frequency of this problem seems to be increasing and can sometimes be related to times and areas where lightning strikes have been frequent and are suspected to have occurred.

Although these strikes are commonly presumed to be responsible following a thunderstorm, other things and conditions can be contributing factors as well.

Electrocution: Electrocution may result from a lightning strike, a power surge or even stray voltage from your own faulty electrical pumps, heaters, lights or UV units. These stray currents can induce severe muscle contractions which can lead to spinal column fractures. Bleeding within the muscle tissue from this is also a common occurrence.

It is strongly recommended that all electrical objects and equipment in or near the pond be properly grounded and fault protected. Also, check the equipment for any exposed or frayed cords or wires on a routine basis and repair or replace them immediately.

A congenital anomaly: This irregularity is acquired during development and is often noticed in fry and young fingerlings. It is not something that seems to occur suddenly.

Vitamin C deficiency: Fish are not capable of synthesizing ascorbic acid (vitamin C). This vitamin is involved with red blood cell maturation, blood vessel integrity, iron absorption and cartilage synthesis. If not provided, your fish may develop other problems in addition to curvature of the spine. While most manufactured and formulated foods now contain this vitamin, it is easily degraded in storage. If there is a shortage of this vitamin, the effects would be observed in many of the pond fish and would not be age discriminatory.

Tryptophan deficiency: This multifaceted amino acid is required for niacin production. This plays an important role in cell respiration,

## Genesee Valley Pond & Koi Club Newsletter

nervous system function, nutrient metabolism, circulation and healthy skin maintenance.

With manufactured foods and diets, this deficiency is rare but should it occur, it may affect all age groups and the majority of the fish in the pond. In some tests with trout, the deficiency caused a temporary scoliosis that was reversed when they were fed a quality diet.

The key for good health here as with any of the various deficiencies is to provide a fresh, well stored, quality manufactured food diet based on the latest koi nutrition research.

Organophosphates: These environmental pesticides can easily enter the pond through run-off and spray drift. Members of the carp family are extremely sensitive to diazinon and malathion which are commonly used for insect and parasite control in many areas of home and industry.

While they are rapidly metabolized, they may lead to scoliosis by inhibiting cholinesterase an enzyme that is important to the exchange of information between nerve cells. Without this enzyme, muscles may contract and not relax. The spine may then bend toward the contracted muscle. When organophosphates are to blame, most of the fish and all age groups may be affected.

Heavy metals are also capable of causing vertebral damage. A well lined pond can minimize the leaching of these materials from the soil. A pond designed with raised banks will also minimize the flow of these contaminants into the pond from the run-off of surrounding areas.

Trauma: Trauma is usually a single event that may go unnoticed until

the fish starts swimming abnormally. It can occur from sudden bursts of speed, injections into muscles, rocks and other pond hazards especially during spawning activities, rough handling and improper support when the fish is being transported or transferred with a net. Try not to startle the fish by approaching the pond slowly and quietly. Provide hiding places and plant cover to give them a feeling of security. Do not capture or handle the fish any more than necessary.

Myxosporeans: These parasites have been implicated in causing scoliosis. They develop in the cartilage causing a breakdown of the cartilage with subsequent abnormalities developing from there. This parasite requires oligochaete worms that live in muddy pond bottoms to reproduce. Keeping the pond bottom clean as well as using a sturdy liner can be helpful in preventing this disease.

Although some fish can do well with a noticeable curvature of the spine, there is no guarantee that this will be the case. Some actually become so debilitated over time that intervention may become necessary.

There is a potential new product that could be a great boost for water gardeners and pond keepers. Flexible Solutions International, Inc. in Victoria, British Columbia, Canada, has filed an application with the United States Environmental Protection Agency to register a product that is designed to act as a mosquito control agent in the water, while reducing the rate of evaporation from the pond or water garden. If approved, they hope to release the product for commercial

use this year and to the retail level and private use in 2006.

This new product combines their existing *Watersavr* evaporation reduction material with the insecticide BTI (*Bacillus thuringiensis israelensis*).

Since this new product, WS-BTI, is a combination of two products that have already been approved separately by the EPA, they hope the registration process goes smoothly. They anticipate that approval will be completed in early spring of 2005. Their own lab results show that the toxicology levels of the combination were still far below those of a potential risk rating by the EPA.

Since this product is reportedly safe for use in bodies of water containing both fish and aquatic plant materials, it is ideally suited for use in home water gardens and ponds. While the current *Watersavr* product has not been available through retail outlets, commercial users have experienced reduced evaporation levels of about 30% in lakes, reservoirs, ponds, irrigation canals and slow moving streams and rivers.

The *Watersavr* product is a hydrated lime powder with hydroxyl alkenes. The mechanism that makes it work is reported as follows: as the hydrated lime starts to dissolve, it releases positively charged calcium ions that repel each other and they appear to spread across the water's surface. This resulting spreading action seems to form an invisible film that reduces the evaporation.



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## Board Members 2005

President: Larry Hursh

Vice President: Bob Wheeler

Secretary: Kathy Hursh

Treasurer: John Roguski

Pond Tour Chairperson: Brain Nagel

Refreshments: Yvonne Wheeler and Kathy Hursh

Newsletter Editors: Hursh, James, and Nau families

- 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.

## Purpose of the Club

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. 473-6276 or e-mail [lkhursh@aol.com](mailto:lkhursh@aol.com) or visit the club website at

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

## Calendar of Events

- **May 28, 2005:** RCGC Proud Market Plant Sale
- **June 3, 2005:** No meeting tonight See June 5 for information
- **June 3-5, 2005:** LilyFest and Plant Auction.
- **June 5, 2005:** GVPAKC monthly meeting will be at 1:00 pm at LilyFest prior to the plant auction
- **June 10, 2005:** NFKPC meeting
- **June 23-26, 2005:** AKCA seminar in Tulsa, OK
- **July 1, 2005:** No meeting due to holiday weekend.
- **July 8, 2005:** Meeting Topic undetermined
- **July 9-10, 2005:** NAWGS "Parade Of Ponds"
- **July 16, 2005:** RCGC Garden Tour
- **July 21-26, 2005:** IWGS Symposia in Bethlehem, Pa
- **July 23, 2005:** NFKPC Pond Tour
- **July 30, 2005:** Date for GVPAKC Pond Tour
- **August 12-14, 2005:** Koi America in Chantilly, VA

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