



# The Water Spout

## Capital Area Pond & Water Gardening Society Newsletter May, 2005

Capital Area Pond & Water Gardening Society, Founded June 1993

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### MAY MEETING

### ROAD TRIP

**Join us for our May Meeting: ROAD TRIP!**

**WHEN: Saturday, May 21, 2005**

**WHERE: New Orleans**

**ACTIVITIES/ITINERARY:**

- 1. Butterflies and Herbs Plant Sale at the New Orleans Botanic Garden 9:00 AM - 10:00 AM**
- 2. Tour of the New Orleans Botanic Garden 10:15 AM - 11:15 AM**
- 3. Dutch Treat Lunch 11:30 AM - 12:45 PM**
- 4. Aquarium of the Americas Tour 1:00 PM - 2:00 PM**

**RSVP: BY SUNDAY, MAY 15: [mmercier@louisiana.com](mailto:mmercier@louisiana.com) or 266-3590.**

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Capital Area Pond and Water Gardening Society  
Minutes for the April 2005 Meeting

Our April meeting was held on Sunday, the 12<sup>th</sup>, at a very noisy, crowded, but fun and exciting Earth Day in downtown Baton Rouge. It seemed that all of Baton Rouge was there enjoying the perfect weather and the wealth of activities. Baton Rouge Earth Day is said to be the largest celebration of its kind in North America!

Members in attendance that helped celebrate this day were Nellie L. Carter, Betty Klenke, Gerald Bonds, Buzz Werline, Alice Werline, Danna Spayde, Margaret Mercier, Larry Mercier, Shirley Baker, Keith Baker, and James Carter. We had two guests, Rose Marie Powell and Jimmie Powell, who are also our two newest members. Janis Bonds also stopped in for a while before having to go to a former employer's reunion. Those that had to make an early extra effort to set up were Margaret and Larry Mercier, James Carter, Lance Beecher, Keith Baker, and Mary Beth Guidry. Our appreciation goes to all our volunteers who operated our booth during the day, Sandi Bordelon, Gerald and Janis Bonds, Charlotte Gray, Betty Klenke, Buzz and Alice Werline, Danna Spayde, and James Carter. We also had youthful, energetic help from LSU students from a Service Learning Class for set-up and take-down.

Margaret was finally able to call the meeting to order about 3:00. With so many people coming by our booth and Margaret's busy involvement in other Baton Rouge Earth Day events, it was hard for her to get the meeting going. However, do it she did, as always!

Margaret thanked everyone for coming with a special thanks to the volunteers. She thanked James Carter and Lance Beecher for rounding up and caring for the fish that we sold at the LSU Garden Show and Baton Rouge Earth Day. James also donated the glider that we raffled. We all appreciate him as well as everyone else who donates their resources and time, that all-important element for all of us.

Margaret gave us information concerning events and club business that the Executive Committee will be discussing during their May and June meetings. The committee is changing the bylaws and filing a 501(c), (3) form with the IRS. We are also considering renaming the club so that we would be more regional in scope. Some names under consideration are Gulf Coast Pond Society or Deep South Koi and Pond Society. The membership voted to let the Executive Committee make the decision about a new name. Motion to this effect was made, seconded, and passed unanimously. Another consideration is joining the American Koi Association.

Our April balance is \$1,956.29. Lance Beecher has been working very hard on the format for our monthly Treasurer's report and to bring all of our financial information up to date. Just a reminder - our fund raising efforts are used to support our educational programs and our community service projects, such as building the ponds at Bluebonnet Swamp and EBR Mosquito Abatement and setting up an Aquaculture Scholarship.

Ideas for upcoming meetings were presented. Discussions will be held by the Executive Committee about plans for the May and June meetings. Possibilities for May and June are holding our Birthday celebration meeting one month and hosting a field trip to a plant sale and tour at the New Orleans Botanic Garden, Dutch-treat lunch, and a tour of the Aquarium of the Americas for our other monthly meeting.

Other possibilities include:

- July (tentative): A "Make It and Take It" meeting. Suggestions were a fountain, terrarium, and Hypertufa. Hypertufa won out. Hypertufa can be made into planter boxes, troughs, and other

lightweight containers using concrete and peat moss. Be sure to come to the July meeting and you can find out how to make one.

- August (tentative): A New Iberia Trip. Possibly go to Stokes Tropicals in the morning, have lunch and in the afternoon visit one of the local Koi farms, other local water features, or nurseries.
- September (tentative): Tour for members only. A question was asked about why the public tour was not being held. Margaret told us that we have not been making money with our public tours. Everyone did enjoy the Members Only Tour last year.
- October (tentative): Halloween Party – all members could come as a swamp creature.
- November: No meeting - Thanksgiving
- December: Christmas Party.

Please bring your ideas for pond society activities to our next meeting.

Announcements of upcoming activities were made. The Pond Society will be having a booth at the Tomato and Herb Festival at White Oak Plantation on June 12<sup>th</sup>. If you would like to volunteer please call Margaret and let her know. This should be a very entertaining event. Danna invited everyone to go with her Orchids for Seniors Study Group to the Governor's Mansion on the 27<sup>th</sup> to tour the mansion and gardens.

Door prizes of raffle tickets were won by Rose Marie Powell and Keith Baker.

Margaret again thanked all present for coming and closed the meeting to accommodate the crowds that were still coming. If you were not able to join us, you missed a fun day and a very informative meeting. Hope to see more of you at our next meeting in May.

Respectfully submitted and hopefully informative and interesting as well.

Sandi Bordelon, Secretary



# **KOI HERPES VIRUS**

## **What to do if you suspect you have this disease.**

**An article by Paula Reynolds  
Aquatic Patho-biologist & Epidemiologist  
Lincolnshire Fish Health laboratories & Research Centre**

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### **Avoid panic measures**

The diagnosis of any serious disease cannot ever take place beside a Koi pond. If the behaviour of Koi suddenly changes and heavy mortalities are taking place the hobbyist must not jump to conclusions. By process of elimination ammonia, nitrite, and pH swings should be investigated in looking for the cause. In addition toxins from pond construction materials or even rainfall must be considered as these kill Koi more often than is realised. Parasites are a frequent culprit and mucus smears should be taken from several fish to ensure that only a normal parasitic level is present. Only when it is established that none of these is a factor in the mortalities during a period when water temperatures are high is actual disease more likely to be the cause rather than an environmental health problem. Whilst Koi Herpes Virus is one possibility there are other diseases that create similar signs and behavioural changes in Koi.

### **Various signs**

KHV does not behave identically in all outbreaks and disease signs vary depending on how acute the outbreak is. Some Koi have no external indication of a health problem whilst in other cases severe gill necrosis and skin changes are observed. It is the cellular changes internally that are one of the key factors in the diagnostic process. Commonly nearly all affected Koi become lethargic, refuse food, and exude mucus. Outbreaks occur between 18-27C/60-80F and depending on water temperature and the form in which the virus presents it can take 12-14 days or even longer for the infection to spread.

### **The diagnosis**

In order to obtain a diagnosis of KHV it is necessary to sacrifice a fish for post-mortem examination. This ensures firstly that there is sufficient clinical information and pathological criteria for presumptive diagnosis of a viral disease before any virological investigation is initiated by CEFAS. Secondly it may save Koi if the examination reveals that KHV is not the cause and immediate treatment is possible. Thirdly it ensures that the resources of CEFAS are not wasted as KHV is not a notifiable disease and they are not required to take any action. Koi-keepers should appreciate that CEFAS does not research for the Koi Industry. The valuable work of this government department is to protect human health and monitor our waterways. It is the Koi industry that has to put its own house in order working in cooperation with DEFRA and CEFAS.

### **Testing for virus**

After the post-mortem is completed and the presumptive diagnosis made Koi or tissue samples are subjected to a polymerase chain reaction test (PCR) by CEFAS. However the PCR is not sensitive enough to establish the presence of virus in all samples. Despite inclusion bodies clearly visible in micrographs, which strongly suggest a viral agent is the culprit, confirming KHV to be the causative pathogen is not always possible. Some hobbyists are unwilling to sacrifice Koi with a chance of surviving the disease which is understandable with pet fish and in addition the speed of death can limit the possibilities for examination and testing

### **Will all Koi be infected?**

The mortality rate in most infected ponds is high although susceptibility to the virus depends

very much on the genetic history and immune response in each exposed fish. Some Koi have a natural immunity to the virus and can appear totally unaffected whilst other fish around them are severely ill. The disease is highly infectious and if no new Koi have been purchased recently sharing pond equipment and hospitalising fish for those without the facilities to care for their own sick Koi are also possible factors. Dealers are asking hobbyists to make appointments rather than arriving at their premises with fish for examination or treatment because of the risk of cross-infection by the public.

### **Disease caused by Herpes viruses**

Herpes viruses are the most common type of DNA virus causing disease in fish. Carp pox that causes the unsightly shiny white tumours in colder weather is scientifically termed Cyprinid Herpes Virus (CHV) and should not be confused with KHV. There is no treatment for Koi Herpes Virus and claims that various pond medications or cold sore remedies will cure it are false the resulting recovery from the virus is in fact a natural one. However, in some specific outbreaks remedies are used successfully to deal with any secondary health problems, which arise frequently to complicate both the diagnosis and the recovery phase. The name KHV has not been universally adopted and those who regard this disease not to be caused by a herpes virus favour the term KV.

### **Re-stocking the pond**

Given the water temperature the signs of disease and the high mortality levels that many hobbyist have experienced it is likely that many outbreaks of disease have taken place that cannot now be substantiated as caused by Koi Herpes Virus. The vital issue having lost Koi to what is suspected or confirmed to be KHV is how soon is it possible to restock an affected pond. There is no straightforward answer as every situation varies and the following time scales are not accurate epidemiologically but are well within safe margins for the hobbyist dealing with disease in pond conditions.

In the case of a total wipeout in which immediate restocking is the aim power washing the pond and filter is advisable with either an iodophor disinfectant or a strong solution of potassium permanganate, often renewing the filter media is easier and safer. After thorough rinsing the system can be restarted and new fish introduced. However if time can be left to elapse before restocking an empty pond a month is adequate and then cleaning will not be required. If there are fish surviving and the vast majority of hobbyists will have survivors it is essential to leave the Koi to totally recover before introducing new Koi. Every outbreak will vary in respect of the virulence of the disease and influence of water temperature so there is no definitive safe period. In epidemiological investigations carried out at LFH over several years survivors are no longer infectious a few days after the very last fatality but there are risk factors and hobbyists are advised to wait one month after the last fatality.

### **The decision to euthanase**

The decision to euthanase every fish following a viral outbreak in case of a future incident must be a personal one as there will always be unavoidable disease risks when keeping any animal and it is fact that viral disease never completely disappears once a pond has been infected. In our research ponds at LFH we have observed two completely different scenarios. Koi surviving viral disease live alongside Koi from all over the world known to have variable immunity to KHV however no disease outbreaks occurred in these populations after seven years exposure. However we have ponds in which further outbreaks have occurred. Those Koi surviving the first outbreak survived the second having all developed an attenuated form of disease but the naive Koi housed with them experimentally died of confirmed KHV. Some hobbyists choose to house post-viral Koi in a pond of their own with non-susceptible species such as Sturgeon and Orfe etc. In all trade premises the risks are too great and stocks should be humanely

destroyed or housed elsewhere after a KHV outbreak.

### **Apportioning blame**

There is a tendency to blame the last Koi that was purchased whenever a health problem strikes and this must be seen in perspective. Statistically outbreaks of KHV are more likely in newly purchased Koi. Recently imported fish pose greater risks due to the stress of transportation and environmental changes. Any disease can be carried by an asymptomatic fish this type of outbreak being triggered only when all the parameters are appropriate particularly water temperature. However what is not fully appreciated is that if the conditions are inappropriate for an outbreak of KHV a carrier fish can be absorbed into the fish community and may be responsible for subsequent outbreaks years later but never revealed as the culprit. Naive fish purchased since the original carrier can be the first to die and wrongly blamed for the outbreak.

### **In the pond already**

It is a fact that some ponds are already home to Koi carrying KHV in which as yet no outbreak has occurred. There is no possible method by which such Koi can be tested as explained the PCR is not sensitive to latent disease in healthy fish stocks. At this time there is no action that can be taken that will help to minimise the risk of an outbreak.

### **The melting pot syndrome**

Melting pot syndrome is my personal term for what is now happening to Koi because of their exposure to disease and the variability of both the innate and acquired immune response. They are nowadays exposed to any number of potentially cross-infective environments both before export and on arrival in the U.K. Koi are transported around a distribution network and held in premises with fish from worldwide sources, which makes tracking disease impossible. In research we have demonstrated that by exposing Koi to KHV in an attempt to establish immunity whilst the fish themselves do indeed develop a degree of protection it is possible that certain Koi exposed in this way can be the cause of later outbreaks and our epidemiological studies in this area continue.

### **Prevention -not cure**

Many of the outbreaks of KHV that I have been involved with causing high mortalities occurred because quarantine was not carried out. Despite all the advice in the aquatic magazines to quarantine it still seems that the Koi-keepers favour taking risks. There are other equally serious diseases that threaten Koi besides KHV and quarantining should be an accepted aspect of the hobby for all serious Koi-keepers. Many dealers recognise that they can only partially acclimatise Koi and acknowledge that a period of quarantine with a naive companion fish from the pond is still the best possible way to safeguard existing Koi. The water temperature should be raised gradually into the range stated above and held there for three to four weeks. There is the risk that you may lose the fish in quarantine but your much-loved Koi will be safer.

### **Honesty**

Having dealt with the misery that KHV can cause to hobbyists for many years I am sure that most Koi-keepers accept no dealer knowingly sells infected Koi. KHV is uncontrollable and no individual or company can be held responsible for the disease itself. However dealers are responsible for is the manner in which they deal with the public when they are suspected or confirmed as selling virally infected Koi. The hobbyist considers that the truth from any organisation or individual with whom they trade when livestock are lost is theirs by right and in my experience hobbyists continue to support the dealers who are honest about KHV and who offer them their cooperation and sympathy in the aftermath of an outbreak.

## Internet Interests...

**Best Website on the web. GO THERE!**  
Capital Area Pond & Water Gardening Society  
<http://www.capwgs.org/>

Here are a few of our members favorites...

- Pond keeper Magazine <http://www.pondkeeper.com>
- Water Gardening Magazine Info on disease topics for aquatic animals <http://www.koivet.com>
- National Pond Society <http://www.bandd.net/nps/index.htm>
- Austin Pond Society <http://www.austinpondsociety.org/>
- Stokes Tropicals in New Iberia <http://www.stokestropicals.com/>
- Rare and Exotic Seeds <http://www.seedman.com>
- Big Cat Sanctuary <http://www.yogieandfriends.org>
- Miami Valley Water Garden Society Web Page <http://www.mvwgs.org>
- Pond Pals Tour <http://members.aol.com/marylady/pondpals/pindex.htm>
- Water Gardening Magazine <http://www.watergardening.com>
- Master Garden Products <http://www.mastergardenproducts.com/watergar.htm>
- <http://www.ponddoc.com/>
- [www.gardenlink.com](http://www.gardenlink.com)
- St. Joseph Water Garden Society: [www.sjwatergarden.com](http://www.sjwatergarden.com)

Go to the CAPWGS website for more favorites. If you have a favorite that will benefit other society members, please let us know. Thanks!

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**Note from the Editor:** I look forward to serving as your Newsletter editor for this year. Your ideas or any information you would like to add to the newsletter are always welcome. Please contact me at 225 755 2449 or email me at [betty@lakeshoregroup.com](mailto:betty@lakeshoregroup.com).