



Charleston Showa Koi Club

Last meeting...

Our last meeting was held at the home of Ralph and Sue's. We all had a great time. We had a guest speaker John and Mary Brabham, they are the proprietors of Just Koi Water Gardens in Columbia, SC and John was also a member of our club, but it is more than 10 years ago. They specialize in selling equipment particularly UV's and they talked about the correct selection and use of UV's in Koi Ponds. Thanks for coming.



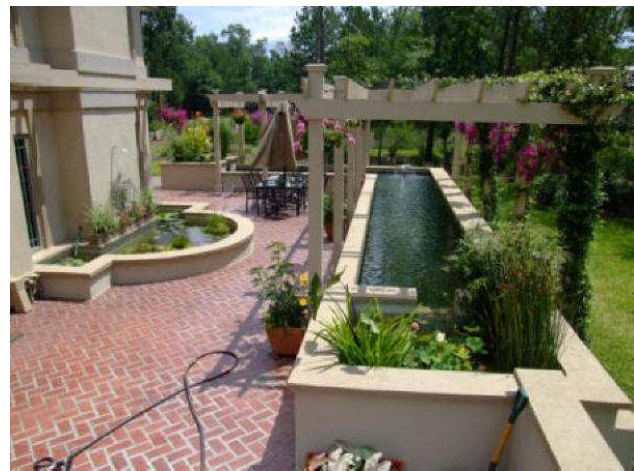
Calendar of events...

August 9 – Margaret Seres 2:00
September 13 – Chris and Mark
September 18 – 20 Atlanta Show
October 11 Chuck and Beth
October 16-18 NCKWS show in Cary, NC
November 6-8 Charlotte Show
November 15 – Ty (Matt McCain)
December 13

Meeting times and places may be subject to change.

Our next meeting...

Our next meeting will be held at the home of Margaret Seres on August 9th at 2:00. Cindy is going to have information prepared for us about another koi grow out contest. See you all there!



Algae Control - No more green water
<http://www.koiclubsusa.com/cat79.htm>

What's the difference between a UV Clarifier and a UV Sterilizer?

UV-Clarifiers are used to kill algae along with some disease organisms. The water flows through UV-Clarifiers faster than the UV-Sterilizers.

UV-Sterilizers kill 99% of floating algae as well as other living organisms. They do not harm the beneficial bacteria that grow in filters and on rocks, etc. in the pond. They kill the organisms that are floating in the pond water.

For Koi keeping it is best to opt for a UV sterilizer because it not only clears 'Green Water' but, as the term 'Sterilizer' infers, it also sterilizes the water itself - thus helping to kill the harmful Bacteria that lives in the water.

Where do parasites hide by James

P. Reilly or do they hide at all?

Sent by Cindy Combs.

Parasites can be found all over a koi's body. But of course because of their size we imagine that they are hiding everywhere in the pond. Truth is, most parasites are DEAD if they fall off the koi's body and do not hitch a ride on another one in a matter of hours (not true with all but with some of the common ones- like flukes- very true.

And although parasites can be found anywhere on a fish's body they tend to gather at key points on the fish. These points of congregation are where slime coat is thinnest or where blood circulation is closest to the surface or where epidermal erosion is the greatest (rapid skin replacement). Favorite spots are also areas where they can't be brushed off so easily with flashing and also where current is not as great a factor.

So when you scrape a fish, you might want to concentrate on areas like this;

1) behind the gill cover as the fish is constantly trying to 'blow out' parasites settling on the gills themselves.

2) near the pec joints- a great relaxing area for parasites.

3) along the sides, where the slime coat is thinnest along the lateral line.

4) same for the upper belly and chin- great comfort zone if you're a bug!

The beginner is often worried about pressing too hard when collecting a slime coat sample on a glass slide. Admittedly,

it takes a little bit of technique to do this easily and quickly, but it's not that hard to learn. And except for the smallest doitsu fish (very thin skin and no scale protection) you are not likely to cut the fish's skin. Think of it as shaving face or legs- a firm but controlled motion. The proof is in the results and if you see the mucous on the edge of the slide- "you Done good"!

Just spread it with the cover slip and add a drop of water from off your finger tip--- cover and you are ready to scan. Do remember that the microscope light will dry this sample so you only have about three to four minutes use if that sample. Scan like you would read a line in a book but when you get to the end of the 'sentence'/slide, drop down and move over the line from right to left. then drop down again and go from the left to the right -- repeat-- until you have read the entire slide. The parasites will appear to be 'hiding' on the slide sometimes- again, they aren't hiding but based on collecting technique, you may find they are bunched up in only one area of the slide. Or if the light is too bright, invisible due to the fact that the bright light burns right thru their thin walled bodies and makes them hard to see.

Getting good at this takes practice. But you can go to a local poorly run pet shop (one of the chains) and if they have not salted too much you can usually find two or three different types of parasites on them for study. If that fails, go to a bait shop--- BINGO!

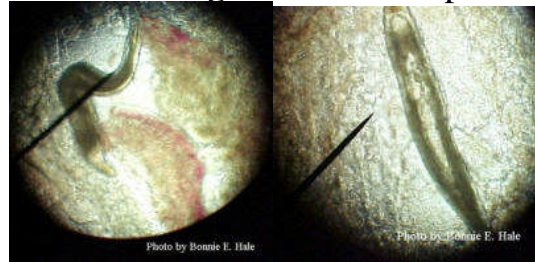
Now some information on flukes. Remember that Cindy is an active KHA and our club has a microscope that everyone should know how to use. If you want your own some of the inexpensive ones can see parasites on your fish.

Parasites in our Ponds...

By Robert Lewis

Parasites in our pond can cause serious problems for our koi. In order to control the level of parasites in our pond we must understand their life cycles. Problems with parasites are usually associated with new additions to the pond or environmental problems such as low oxygen levels, nitrite levels. Low oxygen levels can stress the fish. Low oxygen levels are more likely in the summertime when temperatures are higher and also when you are treating your pond for algae. Overfeeding and overstocking in excess of what the biological filter can take care of can cause the nitrite level to rise. Low oxygen levels and low PH levels also frequently lead to nitrites rising. Frequent parasite problems would tend to suggest that environmental factors in the pond are less than ideal. Fish in a pond with good water parameters are able to cope with a small amount of parasites, which are often present in small numbers even in the healthiest of ponds. At cooler temperatures in the pond very little activity occurs, bacteria, parasites and the fish are relatively inactive. When the temperature begins to rise, activity increases in the pond. This can cause problems for the fish, as the increased bacteria and parasite activity are occurring before the koi's immune system is able to react. Keeping this in mind we should be particularly vigilant in the springtime. Some signs of disease are, fish jumping or scraping against the pond side and floor, fish remains alone and stops being social, fish refuses to eat, fish breathes heavily opening and closing the mouth and gills. You can have parasites in a pond and only one or

a few of the fish be effected because as they differ in personality they can also differ in the ability to resist or fight disease and parasites.



Skin flukes are to koi what fleas are to dogs.

Skin flukes are common and may cause severe skin irritation, causing the fish to rub itself on anything within the pond causing damaged skin, thus letting bacterial and fungal infections occur. The life cycle is interesting in that each adult carries a smaller *Dactylogyrus* to which it gives birth. This younger parasite has another embryo within it, and the rate it reproduces increases with the temperature. Being a livebearer, once the adult is killed the cycle is broken.

Gill Flukes are also a common parasite of koi. Gill flukes irritate the gill membranes, thus causing the fish to rub its gill covers on anything in the pond, causing severe gill damage if action is not taken. These parasites are hatched from eggs and become free swimmers looking for a new host. Without a new host it will die in 24 hours, if it finds a host it crawls on the skin similar to a caterpillar, and then attaches to the gill filament. This is only two of many parasites.



Fish with **gill flukes**

380 x 250 - 42k - jpg

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