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Volunteer Coordinator: (vacant)	
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Koi Rescue: Chase Tomkosky	rescue@atlantakoiclub.org

By the Pond

September, 2020

Hello Koi People,

Hope everyone has a safe and great Labor Day weekend! I know 2020 has been a tough and disappointing year for our club since we have had to cancel all of our major events. Hang in there and please take the opportunity to join us with the zoom meetings. Kevin has been working very hard to keep us in contact during the unexpected challenges of this year's events.

We will be holding elections this year through the zoom meetings. We plan to have the candidates talk about themselves and their ideas for our club on the zoom platform. This will be a different way of electing officers but it is the only way we can do it. As I and the board iron out the exact details for how this process will work I will be informing everyone as we go.

On the up side I'm sure we have all had a great opportunity to spend more time with our wet pets and ponds. I pray everyone stays safe and healthy as we continue to navigate 2020. I hope to see many more of your faces on our upcoming Zoom meeting!

Fins and Fun,

Chad Bishop, DVM

Atlanta Koi Club President

Our next AKC "Zoom" meeting is scheduled for Sunday, September 13, @ 3:00PM **(NEW 3PM TIME!!!!)**

Topic: Atlanta Koi Club - Showcasing A Surgery Of A Young Koi - Removing a life-threatening Growth

(This video contains graphic footage of a surgical procedure - Performed by Dr. Chad Bishop - Procedure videoed by owner of koi, Diane Giangrande)

****SPECIAL NOTES:**

(A) everyone's microphone will be "muted" upon joining the meeting - please don't be offended - this will help keep us from having background noise and keep everyone from speaking over others. Remember, this is a learning curve for many of us and we will unfold and change as necessary!

(B) Presently, there is a maximum limit of 100 participants (100 computers/laptops/mobile devices that can view the meeting at the same time). IF we achieve maximum capacity, don't worry, we plan to make the video meeting available to any member who isn't able to attend.

If you want to showcase your pond, discuss your ponding accomplishments, teach a topic or offer help with a Zoom meeting, please send me an email to vp@atlantakoiclub.org

See you on-line!

Stay safe,

Kevin McDonough

"Your AKC VP"

Greetings fellow AKC members!

Sending all of you sincerest wishes during the “summer wool humidity blanket”

First, a few special “thank you’s” that must be mentioned:

Melanie Onushko has twice now been a strong volunteer in helping us by submitting pond-related videos. I enjoyed the opportunity to help her edit the video! Thank you Melanie!

Bob & Sue Chaffer - Contributing a “shockingly” entertaining video. Hopefully now keeping the Raccoons at bay. Thank you, Bob & Sue!

Thank you to my wife, Rhonda, who helped edit each of the videos and who corrected “thousands” of my mistakes...while thankfully dialing me back a notch.

Diane Giangrande and Dr. Chad Bishop (AKC President) - who just submitted a detailed surgery video about a growth inside one of Diane’s young koi. As of the date of this newsletter, the video has not been aired but will be available for viewing during the next AKC ZOOM meeting, currently scheduled for Sunday, September 13th @ 3PM. This really is a must-see as Dr. Bishops attempts to surgically remove a life-threatening growth from the abdomen of Diane’s young koi. Thank you both!

For those of you who missed any of the previous videos, they are now visible on the AKC YouTube page - Search YouTube for: Atlanta Koi Club Organization

Note: Recording your Pond Videos: Recording Tip:

If you want to record your pond-related videos, please try to record them in Landscape mode (turning your phone sideways). By doing this, the finished video is recorded using up the entire screen. This makes viewing much easier and more desirable for the viewer.

Please remember that I am here to serve you - please let me know if I can help in any way in general or as your VP.

(Throwing each of you an elbow bump and virtual hug)

Stay safe, healthy, be mindful of your ammonia levels and keep an eye out for the traveling heron!

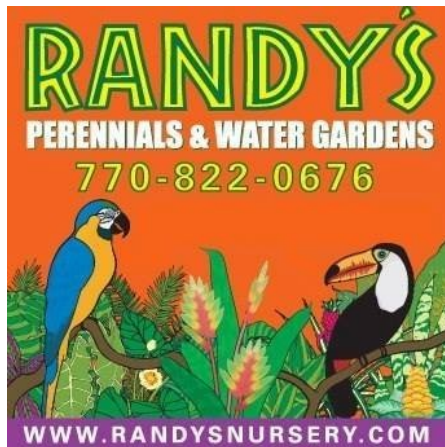
Best wishes,

Kevin

Your AKC VP

Please remember our Sponsors:

Randy's Perennials, Splendor Koi and Pond, Koi Koi Pondscapes, Coastal Pond Supply, Atlanta Water Gardens, T&T Uniforms, The Koi Store, Neptune Aquascapes, and Mosquito Curtains



WWW.TandTuniforms.com

For Sale by Club Members

For Sale

GC Tek Zapp Pure ZP-20 UV - \$300

Needs new bulb (\$199.99), ballast (\$169.95) and maybe quartz sleeve (\$144.95)- retails for \$1,559.95. Replace part costs are from GC Tek - you can get less expensive parts online....(contact Bob Chaffer for information)

Specs as follows:

High Intensity-70,000 microwatt output.

316 Stainless Steel- not 304 like most stainless units.

Longlife Electronic Ballasts.

Optional GFIC protector.

Long 12' cord or longer by special order.

2" inlet/outlet.

4" Diameter keeps the water close to the lamp for maximum kill in a single pass.

4" Diameter vessel is the perfect size for no restriction flow.

Quartz Sleeve LeakTite fitting is all stainless, including the lock down nut - not troublesome plastic like some units.

Lamp changing is easy - takes only minutes.

Adjustable pressure switch equipped for automatic easy on/off as flow demands. **If your pump fails this unit shuts off so you don't cook it.**

Pressure switch bypass button equipped for easy testing of lamp and ballast.

Can be mounted horizontal or vertical.

Polished inside and out for maximum effect- some stainless steel UV's are polished only on the outside.

ZAPP 20.....43 in. tall....for ponds up to 20,000 gal. with optimum flow rate of 6000 gph.

Draws only 86 watts

Contact Diane Giangrande @ dianewg@aol.com



Before you Build - Pond Building Concerns

Submitted by [mikey](#) on Sun, 04/05/2015 - 11:35 Koi International
by Mike Anger

When thinking about pond construction, there are a number of items to consider even before the subject of filters. Consider its location: how much sun will it receive, are there trees nearby that may provide shade (or be a burden with leaves falling in or roots that could damage the pond)? Avoid nearby roofs that might have drainage that could enter the pond and be harmful to your fish and plants. Try to avoid a low area of the yard to prevent ground water from entering the pond, and have its perimeter higher than the surrounding area to keep out runoff. Ideally the location should be some place that you can enjoy-closer to, and perhaps where you can see it from the inside of your home.

Size does matter. Despite the recent beautiful weather, we do have cold spells. Depth should be a minimum of 3 feet, but preferably 4-6 feet deep. The volume depends on many factors-how much space, filter size, number of fish and plants planned and cost. The calculation is length times width times depth (in feet) times 7.54, equals the number of gallons. Ponds may be preformed, concrete (it must first "cure,"), fiberglass, or the newer spray on polyurea.

Ask any Koi keeper and I bet any one would rather be enjoying their Koi than performing pond maintenance; keep it as maintenance free as possible. Use bottom drains to pick up the detritus and ensure that

the pond bottom slopes towards your bottom drains (at least 1 to 2 inches per foot) spacing them 8 to 12 feet apart. I am amazed at the businesses that sell supplies and build ponds who insist that bottom drains are not needed! Plan a skimmer to pick up floating debris, and locate it at the opposite end from the waterfall. Waterfalls help aerate the water and keep the water in motion. Jets around the pond also provide aeration, minimize or eliminate dead spots (stagnant water) and exercise your Koi as they swim through or against the current.

If at all possible, consider a prefilter. This will remove much of the solids and debris before water reaches the biofilter, decreasing the need to clean the biofilter and reducing the chance of it clogging up and having reduced efficiency. In my opinion, the best type of prefilter is a below ground vortex. This cone shaped filter has water spinning around and causes settlement of solids. Once water leaves the prefilter, it uses a pump to deliver to the biofilter. Here you need media to allow the proliferation of nitrosomas and nitrobacter bacteria to convert ammonia to nitrites and nitrites to nitrates. There are many excellent types of filters available or you can construct your own. Finally, water is returned to the pond. If you are considering a UV light, here is where it would be placed (after the biofilter).

When building a pond, whether it is your first or a rebuild, spend the time to read, look at many ponds, plan very carefully, examine your budget and don't rush. The extra investment you put in now will reap many benefits in the future.

Water Testing - Ammonia

Submitted by [mikey](#) on Sun, 04/05/2015 - 10:36
Koi International By Mike Anger

“Water, never touch the stuff, heard Koi spawn in it...” (this is a family web site).

When we examine the health of our Koi, almost without fail predating whatever illness we diagnose is a problem with water quality. We all know this, but all too often we are lulled into a false sense of security because of the clarity of our water and the findings of a normal pH and temperature. Is that all we should be monitoring? Why is it that we spend hundreds or even thousands of dollars on fish, yet we sometimes skip the ten or twenty dollar purchase of an ammonia or nitrite test? Remember that even a crystal clear pond might contain toxic levels of chemicals potentially lethal to your fish, while an algae bloom might look terrible (and make it difficult or impossible to see your fish) but actually might be beneficial to your fish.

Our ponds are artificial self contained ecosystems. Koi are *ammonotelic*, that is the majority of their nitrogenous waste is excreted by diffusion (the movement of a substance from an area of higher concentration to one of lower concentration attempting to achieve equilibrium) via the gills into the water as ammonia. Ammonia is excreted in two forms: NH_3 the toxic form, and NH_4^+ the ionized and non-toxic form. The relationship between these two forms is greatly pH and temperature dependent. The higher (more alkaline) the pH, the greater the amount of (toxic) NH_3 , while the lower (more acidic) the pH, the greater the amount of (non-toxic) NH_4^+ . The colder the water, the more NH_3 , the warmer, the more NH_4^+ . Because of Koi's body temperature and blood pH, most excreted ammonia is in the form of NH_4^+ ; this can change quickly depending upon the pond environment. Our biofilters become populated with families of bacteria that convert ammonia to nitrite. Nitrite is also a very toxic substance. Unlike ammonia, it does not come directly from Koi, but is formed almost solely in the filter or source of that family of bacteria. Because nitrite does not come from the Koi, when it contacts the Koi's gills it enters the fish by diffusion (again from the area of higher concentration, the pond, into the lower concentration of the Koi blood) binding hemoglobin in blood rendering it unable to carry oxygen. A second population of bacteria grow in our biofilters to convert nitrite to nitrate, fairly harmless to Koi but usable by algae and plants. As the Koi eat the algae and plants, this cycle begins all over again. The bacteria that convert nitrite to nitrate are the most susceptible to aberrations in water quality and are therefore the first to

decrease in number.

Causes of excess ammonia and/or nitrite may include overstocking, overfeeding, low oxygen saturation, an undersized biofilter, an immature filter (the bacterial colonies have not increased to a sufficient number yet such as in the spring), a dirty filter, a filter too aggressively or frequently cleaned (especially if tap water is used), or chemical treatments that may harm the bacteria.

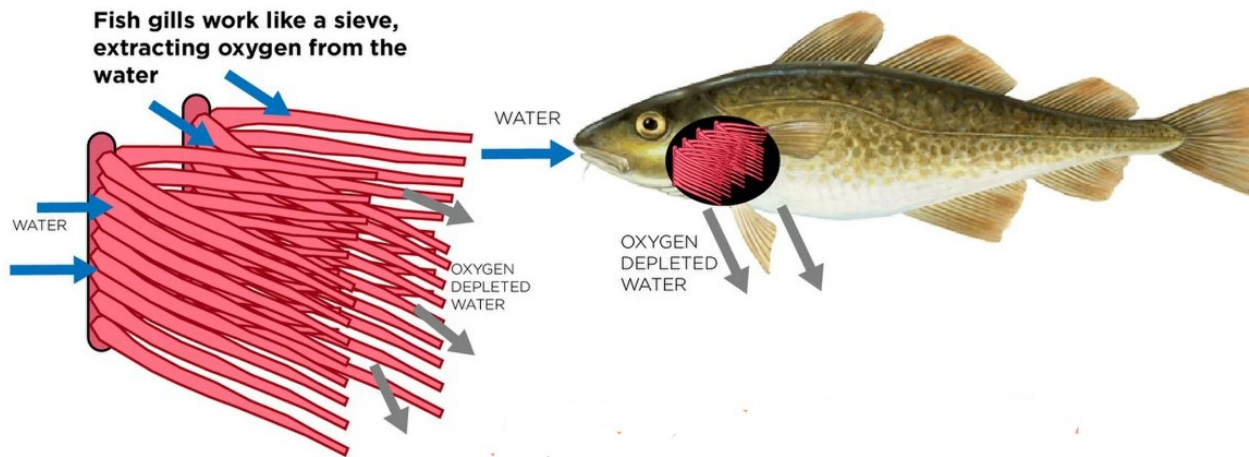
Symptoms of high ammonia may include lethargy and red streaking. Symptoms of high nitrite may also include lethargy (sometimes lying on the pond bottom, though swimming up for food before going down again) and flashing.

There are two types of test kits for ammonia, Nessler and Salicylate. The former uses one drop or tablet and the color goes from clear to shades of yellow and red. The latter uses two steps of drops or tablets and goes from yellow to shades of yellow to blue or green. The problem with the Nessler test is that if you are using treatments in the water that bind ammonia it still reads ammonia being present while the salicylate will not. Just use a Salicylate type Ammonia test kit to avoid false readings. Nitrite tests usually will change from clear to purple.

Treatment for high ammonia may include water changes to dilute it, and binders such as ChlorAm-X or Ultimate which change ammonia from it's toxic form to it's non-toxic form. In it's non-toxic form, the ammonia is still present and will feed the filter, but it is not toxic to the Koi. That is why Koi shows use ChlorAm-X or Ultimate plus aeration, rather than a filter. Neither ChlorAm-X or Ultimate can be overdosed (Koi can live in pure Ultimate!), and an excess just stays in the water, waiting to instantly convert any passing ammonia molecule. These 2 products have been tested and are safe for Koi, while substitutions have been known to cause numerous problems.

Treatment of high nitrite includes water changes, suspend feeding, salt to 0.1% and increased oxygenation. In all cases try to address the underlying cause, especially checking your filter. In the spring check these water parameters with your test kits daily until your bacterial colonies are populated, then weekly, and when stable one each month. These simple precautions may prevent a small problem from evolving into a disaster!

Why Larger Koi Have a Greater Need for O₂



New research, published in the journal *Global Change Biology*, describes the mechanism. Lead author Daniel Pauly, a principal investigator with the Sea Around Us project at the University of British Columbia, said the findings apply to animals with gills, such as fish, sharks, squid, and lobsters.

Pauly's co-author William Cheung, director of science for the Nippon Foundation Nereus Program at the university, explained that these species and many others are ectotherms, meaning that their body temperature depends on environmental temperature.

Metabolic rate refers to an animal's oxygen consumption, which also naturally increases as fish grow into adulthood because their body mass becomes larger.

One might wonder why fish and other marine ectotherms aren't just taking in ever more oxygen. They don't because at a certain point they cannot keep up.

The researchers point out that the surface area of an animal's gills — where oxygen is obtained — does not grow at the same pace as the rest of its body.

"This is because gills, in order to work, must function as a two-dimensional surface — width by height — and thus cannot grow as fast as the three-dimensional volume — width by height by depth — they have to supply with oxygen," Pauly said.

He and Cheung liken how a fish gill works to a car radiator. Both are made up of numerous thin layers that allow for the transfer of heat, which permits cooling. But both can only work in two dimensions because air or water pass through only once.

"There is not much that fish can do to solve this problem," Pauly said. "They can have bigger gills — just as sports cars have bigger radiators — but ultimately, the weight always catches up, and the ratio of gill surface to body weight becomes too low."

Source: <https://www.livescience.com/60211> Koi International

Folding liner

by Michael Anderson

Four ways to fold liner into a right angle corner:

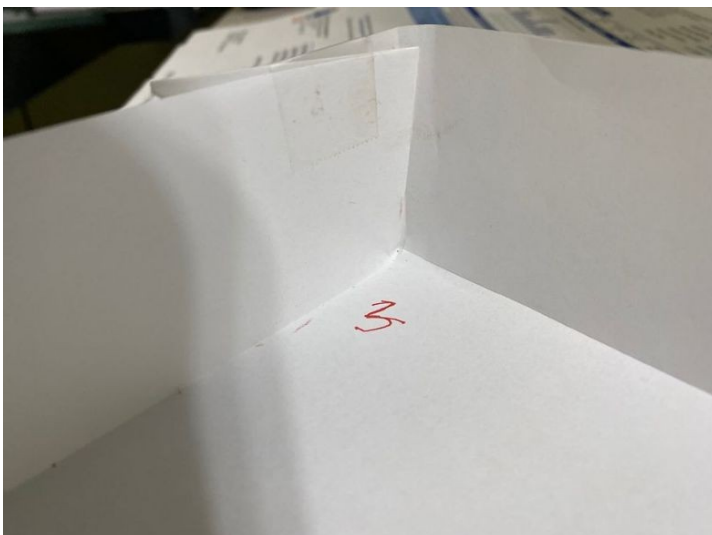
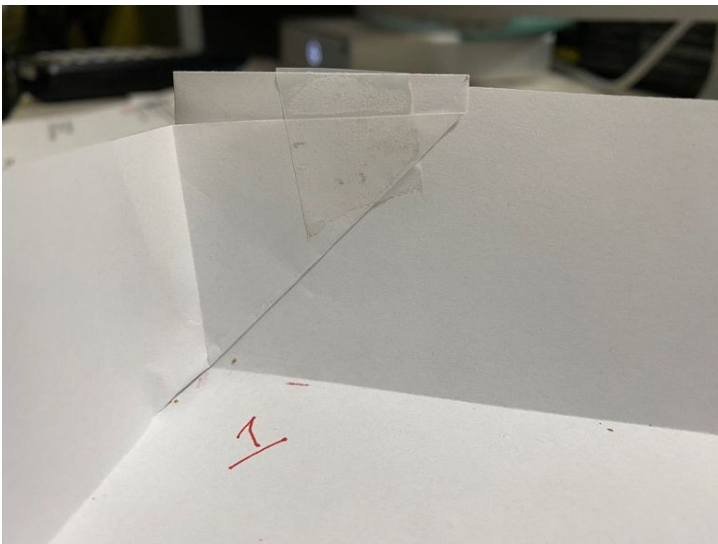
1 Bring the excess liner out into the pond and fold it as one large triangle and tape or glue it to a side wall. This fold can be very visible.

2 The different between this approach and #1 is that the excess if folded into to two smaller triangles. Each triangle is attached to a side wall.

3 With this approach the single large triangle of excess liner is folded behind one of the portions going up a side wall instead of being in front of that portion going up the side wall. The single visible seam will be vertical and in the corner.

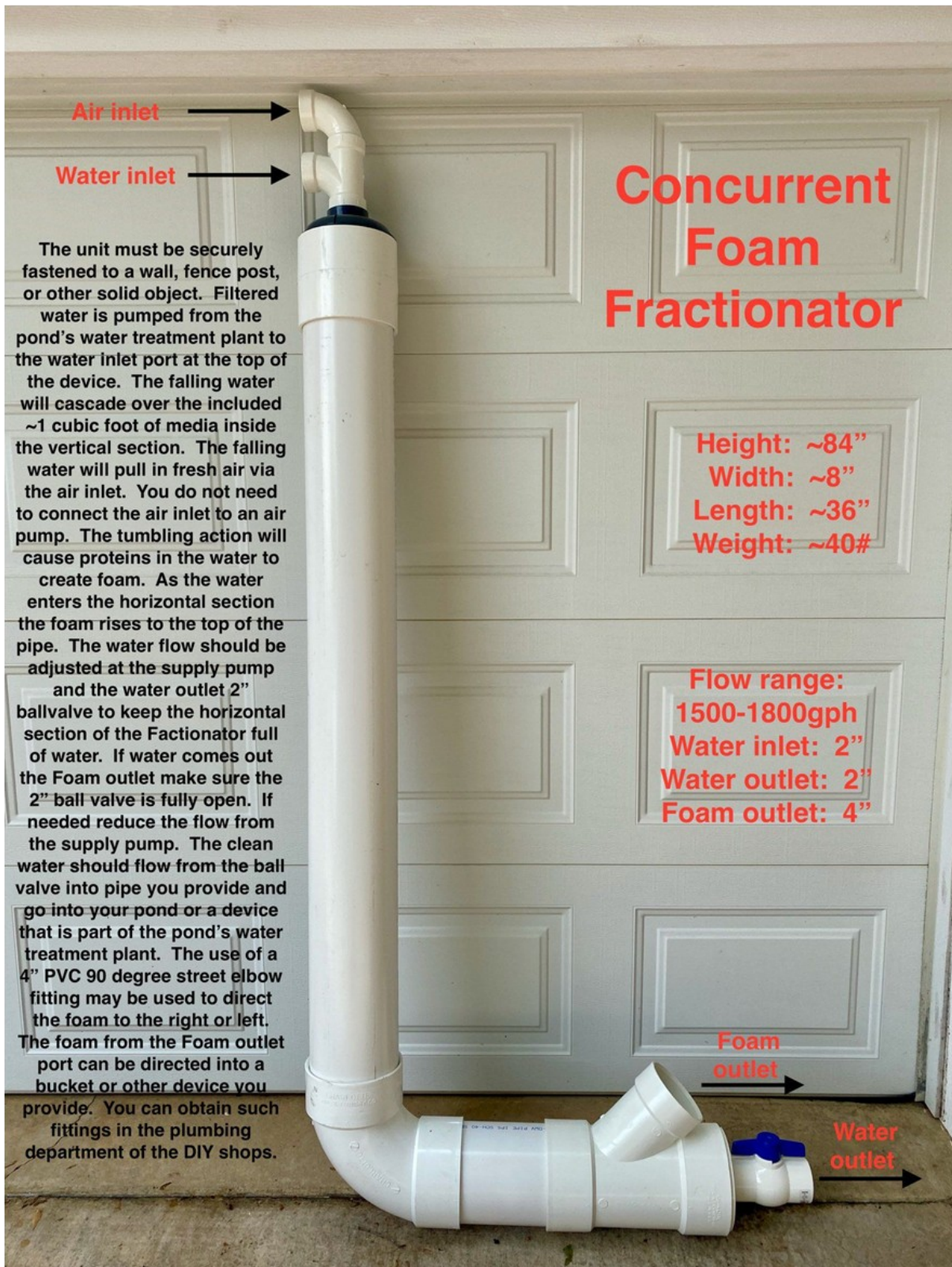
4 The excess liner is folded into two smaller triangles. Each smaller triangle is placed behind a portion of liner that goes up the wall. The single visible seam will be vertical and in the corner.

Note: It can be easier to fold liner with at least one foot of water in the pond to hold down the liner during the folding.

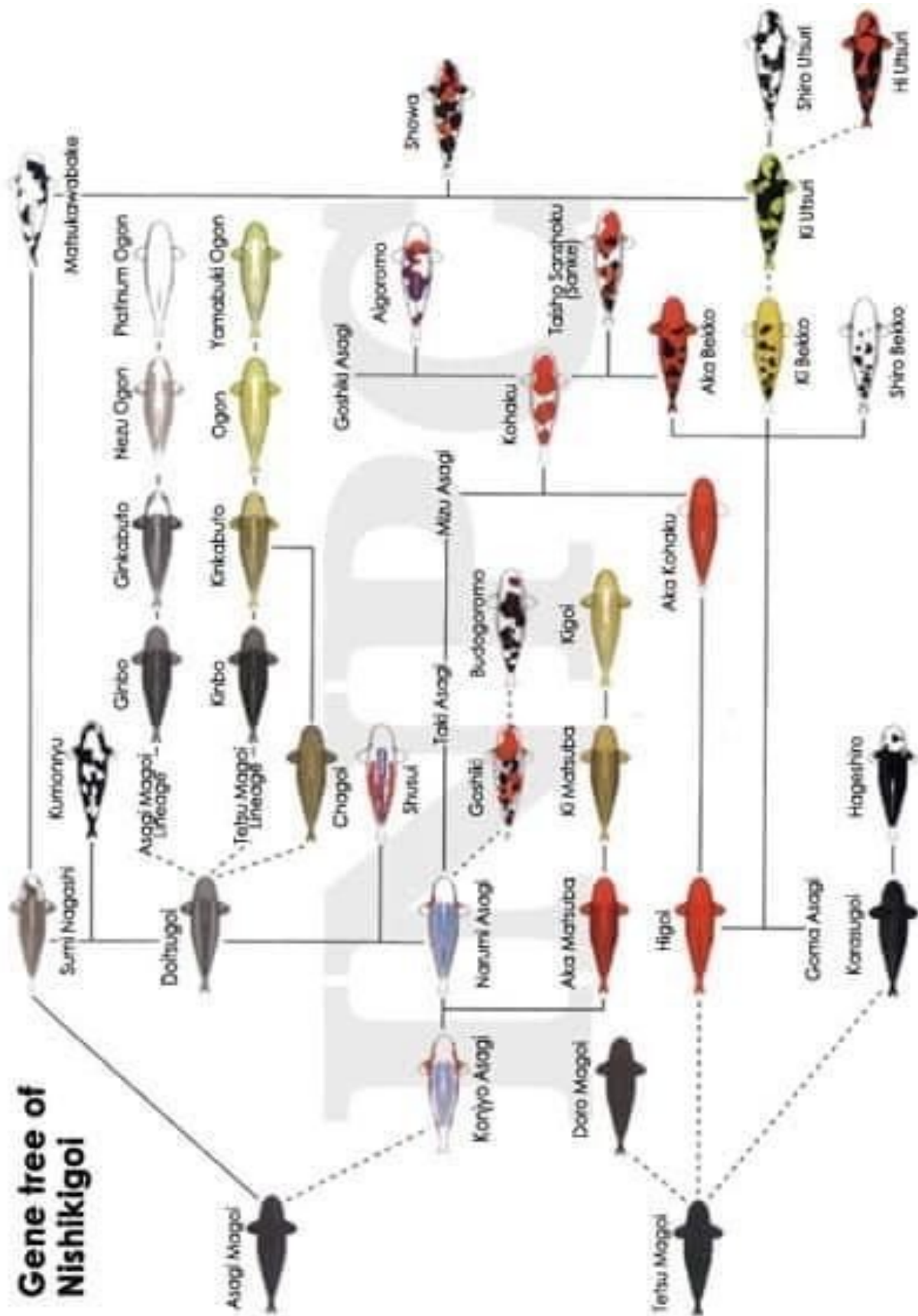


For sale by Club Members

Two Foam Fractionators available. \$400 each complete with media. Installation not included. If interested, email me: mcasan@ourimages.net



Gene tree of Nishikigoi



Atlanta Koi Club
Financial Statement
As of August 31, 2020

BEGINNING CHECKING ACCOUNT BALANCE:

\$12,921.65

INCOME STATEMENT

Income

2700 Membership

2720 Membership Badges	\$24.00
2730 Membership Dues	\$456.00
2735 KOI USA Subscription	\$52.00
2735 KOI USA Subscription - REFUND	-\$52.00
2745 Sponsorship	\$200.00

Total Income

\$680.00

Expenses

400 Insurance

410 Liability Insurance Premium	\$2,972.25
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1000 Raffle Expenses

1030 Monthly Meeting Items	\$25.00
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1100 Rent

1101 Monthly Rent June-Sept. (\$185 p/month)	\$740.00
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Bank

1400 Charges

Misc. Banking	
1466 - PayPal	\$24.22

Total Expenses

\$3,761.47

Month Net Income/(Loss)

(\$3,081.47)

ENDING CHECKING ACCOUNT BALANCE:

8/31/2020

\$9,840.18

Outstanding Checks:

\$1,113.52

09/07/16	EFT	\$65.00	09/27/19	EFT	\$175.00
10/08/16	1311	\$16.85	5/7/2020	1532	299.88
10/24/16	EFT	\$216.00	06/09/20	1534	\$49.99
10/03/17	EFT	\$107.17			
06/15/18	EFT	\$150.00			
10/03/18	EFT	\$33.63			

PETTY CASH:

Beginning Balance:

\$136.00

Income:

2500 Miscellaneous Income

2545 Raffle - Monthly Meeting

Total Income:

\$0.00

Expenses:

\$0.00

Total Expenses:

11

\$0.00

Ending Balance:

\$136.00