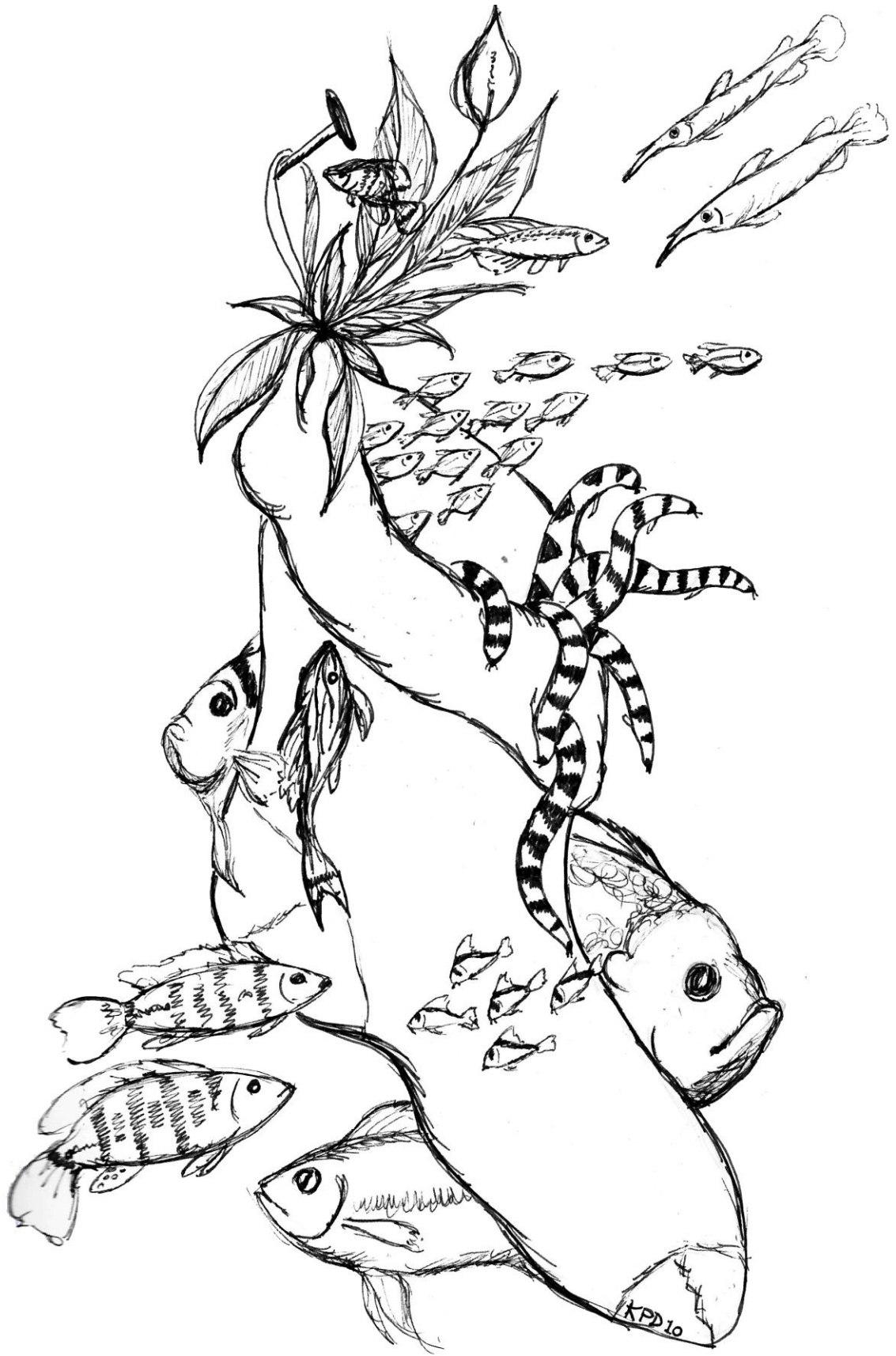


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NOVEMBER – DECEMBER 2010

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MASI's official web page: www.missouriaquariumsociety.com

Join the all-new MASI FishHeads Forum. See web page for instructions.

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Places to Be / Things to See

SATURDAY December 4, 2010

Executive Council, 7:30 PM hosted by Charles Harrison

THURSDAY December 16, 2010

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

THURSDAY January 20, 2010

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

THURSDAY February 17, 2011

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

SATURDAY February 26, 2011

Executive Council, 7:30 PM hosted by Dave and Laura Wagner

THURSDAY March 17, 2011

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

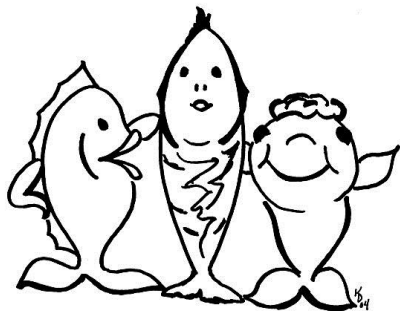
THURSDAY April 21, 2011

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

THURSDAY May 19, 2011

General Meeting, 7:30 PM @ Dorsett Village Baptist Church

Membership



Yearly membership in the Missouri Aquarium Society, Inc. is \$20 per calendar year. Membership includes the Darter subscription for the year, which is currently 6 issues. New memberships and renewals can be submitted at club functions such as meetings and auctions, or by contacting Ron Huck, our membership chair.

So Sez the Prez

By Steve Edie

My Fellow Fishheads,

One thing I didn't think about when I agreed to run for President was that I would be expected to have a column in the Darter. So, here goes the first one. Only a couple of months in and I am very aware that Mike Hellweg did an amazing job as President. (Not that I ever doubted that, but his guidance in helping me along has been invaluable as I try to figure stuff out. I can't imagine the mess I could make without him.) Mike had a sixth sense for when a problem was about to present itself, then deftly sidestepped it with a wisdom and patience I can only dream of. His memory for details; when to send out notices; who had asked a question and needed a follow-up; and his ability to diffuse a disagreement are legendary. A little part of me resents the monstrous shoes he left me to fill. I feel like Tino Martinez replacing Mark McGwire and the unavoidable comparisons. So moving forward, my modest goal is to suck less each month.

Besides a change at the top, Cory Koch has replaced Angela Hellweg as Secretary. We welcome new Executive Council members Kathy Daly, Laura Wagner, and Derek Walker. Marlon Felman replaces Scott Bush as Auction Chair. Kurt Zahringer will be Publicity Chair, a new position. We will surely come up with some new ideas that these new folks will bring. Kathy Deutsch remains as Vice President and Andy Walker remains as Treasurer. Mike Hellweg has moved from President to Executive Council, so we will still have his steadying presence. Pat Tosie and Charles Harrison remain from the prior Council. Gary McIlvaine will transition from Show Chair to Workshop Chair, which should require less effort and less club expense. Continuing in their current positions are Steve Deutsch as Darter Editor and Exchange Editor; Charles Harrison as Webmaster, Forum, and Darter Publisher; Pat Tosie as Corresponding Secretary and O-Fish-L Editor; Klaus Bertich as Historian; Tony McMillan as Bowl Show Chair; Ron Huck as Membership Chair; Scott Bush as Forum Liaison; Bob Buckles as Swap Meet Chair and Fish Raising Chair; Mark Theby as Advertising Chair; Dave Rush as Librarian; Mike Hellweg as HAP Chair; and yours truly as BAP Chair. If I've overlooked anyone, I apologize; it will set the bar to help me toward my goal in the first paragraph. If anyone is interested in volunteering for these or other positions in the future, please see Kathy or me. I think we have a good team in place. Thanks to all of those who have served us in the past. Remember that we are a volunteer organization, and if someone doesn't step up to do it, it doesn't get done.

We have a busy year ahead: auctions, swap meet, speaker workshop, award banquet, Christmas party, picnic, guest speakers, forum discussions, and more. We have started on our conservation project to provide funding for the Fish Ark program, to help protect the many species that are threatened with extinction in Mexico. Look for some special fundraising projects and mini-auctions to support this worthwhile cause. Some of our past projects have included the Stuart Grant Conservation fund to protect Lake Malawi Cichlids; the Vern Parrish research fund of the American Livebearers Association; the Meyer fund of the American Killifish Association; and Project Piaba and Project Amazona to protect species in Brazil. Please consider this an opportunity to "give back" to the fishes we hold dear so that they will still be around for our heirs.

Steve

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Fish (and Frogs) do the Strangest Things!

By Mike Hellweg

Over the past nearly 40 years of working with tens of thousands of individual fish and hundreds of frogs, I've witnessed many strange and interesting things – so many that now I come to expect the unexpected in my fishroom. Both are amazing groups of animals, and we often don't give them credit for intelligence or complex behaviors, yet if we would but sit and watch them for a while each day, we will often be surprised by what we witness. Following are a few things I've witnessed in my fishroom. The stories are true, and no names have been changed.

Livebearers

A male Roatan Island Molly (*Poecilia* sp.) spent most of its day chasing a female giant danio (*Devario aequipinnatus*). It ignored the female Roatan Island mollies completely, and the other male and female giant danios, yet it chased after that particular female giant danio relentlessly. When I moved it to an adjacent tank where it could still see the giant danio, it hung around that end of the tank all day long. I finally moved it back, where it happily took up chasing that same female giant danio.

A pair of Black Marble Hoplos spawned in a community tank. They are a bubble-nest spawning catfish. The nest was so large it lifted the top off of the tank. I had a group of young redline halfbeaks growing out in the tank, along with several barbs. The male hoplo defended his nest against the female Hoplos and the barbs, but didn't even consider the halfbeaks. The halfbeaks would wait until the male hoplo was chasing the barbs, then they would move in and grab a few eggs from the nest. This continued until they eventually cleaned out the nest. Needless to say, I moved them to another tank!

Bettas

During the recent TFH Breeding contest a male Betta pugnax got out of his tank, but didn't wind up as a fish chip. Instead, he somehow got into a tank 6" higher and at a 90° angle to his home tank. I assumed he was a goner since I didn't see him anywhere in his tank or on the floor. A few days later, I noticed that the 100 or so young rainbowfish in the second tank had become about a dozen. As I scrambled to do a water change and started looking for bodies, I discovered that the male B. pugnax was sitting on the bottom under the sponge filter with a body so fat that he couldn't swim and could barely move! Since he had eaten most of the young rainbows, I removed the rest of them, and moved the female and the other male B. pugnax to this tank where he subsequently spawned and produced a large clutch of young.

Many wild Betta breeders note that the mouthbrooding males often hold for about 3 days, and then are out eating again. I noticed this with my Betta channoides males. I added a Zoo Med floating log to the tank, and one day after feeding the tank, I went back by intending to remove the holding male. He was no longer holding. He had gone into the floating log and spit all of the eggs, and went out to eat! After a few minutes, he returned to the log and picked up all of the good eggs, leaving the fungused infertile eggs behind. He then proceeded to complete his normal incubation without any observed repeat of this behavior.

I bought a group of Betta enisae at a big box store, of all places, labeled as "Big Ugly Bettas". The sales girl tried unsuccessfully to convince me that I wanted one of the "pretty ones" in the cups over on the end cap. Since that day I call all large Bettas "BUB's". The female of the group would spawn with one male in typical fashion for mouthbrooding Bettas, laying her eggs on his anal fin, then picking them up from the anal fin or bottom of the flowerpot and spitting them at the male. When the first male would not take any more eggs, she would chase him off and continue spawning with a second male,

gathering up any eggs she had missed with the first male then continuing on with the second male as if he had been there all along.

Killies

I had one of the hermaphrodite Mangrove killies – *Kryptolebias marmoratus*. They are supposed to be brackish water fish, but apparently my fish didn't know that. She somehow got out of her brackish water tank and I found her a couple tanks over in a blackwater freshwater tank with a group of redline halfbeaks. She had laid eggs in the original tank and they proceeded to hatch, so I left her where she was – after all if she was dumb enough to leave her ideal home tank, then I wasn't about to move her back. She proceeded to lay plenty of fertile eggs in the blackwater tank, too. They hatched just as successfully as those in brackish water. I wound up having to set up one quart sized jar for each young fish as they grew, keeping them much like male *Betta splendens*.

Cichlids

My male *Pseudocrenilabrus nicholsi* was being very rough on the females, so I moved them to a tank containing a pair of Blue Rams (*Mikrogeophagus ramerezi*). The rams spawned a couple of days later and were fiercely guarding their eggs. At some point, the eggs disappeared. A day later, I noted that the female *P. nicholsi* appeared to be holding! A few days later, I removed a group of ram wrigglers from her mouth!

During the early months of the TFH breeding contest, Pat Tosie gave me a pair of *Tilapia snyderae*. They proceeded to spawn and later herd their young as normal. The tank had also been home to a pair of *Steatocranus glaber*, which I moved out when I put the *T. snyderae* in the tank. I must have missed some of their fry because I was constantly having to remove “just one more” inch long *S. glaber* as I spotted them darting in and picking off some of the *T. snyderae* fry. I finally siphoned out most of the *T. snyderae* fry, and was surprised the next day to find the pair of *T. snyderae* herding a batch of one inch *Steatocranus glaber* fry instead. They had rounded up every one of the *S. glaber* juveniles and had adopted them to fill the role of the fry I had just removed! Talk about a strong parental instinct!

After spawning *Apistogramma borelli*, I removed the pair to let their fry grow out in the 15 where they had spawned. Barely 10 weeks later, I was surprised to find newly free swimming fry in the tank. There was a barely three quarter inch long female, who was just over 10 weeks old herself, all colored up and escorting 6 newly hatched fry around the tank. As I looked further, I found a second female with 8 or 9 red/orange eggs on the roof of a piece of half inch PVC pipe. Talk about precocious!

I observed a pair of mouthbrooding *Chromidotilapia guentheri* carefully transferring eggs from one to the other so both could eat when I fed the tank. I've never seen behavior like that before, but I've since learned it is common for these guys.

Goldfish

Many years ago, Angela had a big, beautiful red oranda. I got a group of inch and a half long young Dwarf Hoplos at a club auction and brought them home. I thought they would do well in the goldfish tank. But the oranda had other ideas. He grabbed the first and largest hoplo and tried to eat him. Of course the young hoplo extended his fin spines and wound up stuck in the oranda's mouth. He wound up swimming around with the hoplo in his mouth for nearly a week until he was finally able to get it down. For another three or four days, he swam around with his mouth stuck wide open, until he finally got it closed again. From that point on, that goldfish never once ate anything from the bottom of its tank!

When I was younger, there was a small local petshop near my home in North County called Bennett's Tropical Fish. I spent many hours in the shop every week, and made a point of being there when new fish came in. Once in the early spring they got in some beautiful breeder veiltail black moors that were nearly as big around as softballs. The males had breeding tubercles on their heads, so they set

them up in a large child's wading pool, hoping they would lay eggs. Every day, I would go by and check on them. The males would be chasing the females almost constantly, sometimes lifting the females completely out of the pool and onto the floor! From this I learned to keep all of my breeding tanks tightly covered. (Yes, I know I just told you about a couple of fish that escaped their tanks, but I could also tell you about thousands of them that did not).

Egg Scatterers

Many years ago when visiting Sallie Boggs in Pittsburgh, she gave me a huge pair of Blind Cave Tetras that I had admired in her fishroom. I brought them home and they spawned for me the day after we got home. As they grew, some of the larger fry would eat their slightly smaller siblings. For a day or two, I would see a half inch long baby Cave Tetra swimming around with an almost as large Cave Tetra sticking out of its mouth! In spite of this internecine cannibalism, I was still able to raise more than 1000 fry from that spawn!

Frogs

Speaking of internecine cannibalism, many of you know that I like the Pipid frogs and I have often spawned them over the years. They do the same thing – the little froglets and even the almost ready to metamorphose tadpoles will eat less developed or slightly smaller siblings. If you want to raise them in quantity, you need to keep them separated by size!

Speaking of breeding Pipid frogs, when a pair of African Clawed frogs is in amplexus (where the male hangs on with his forelimbs around the female's belly) and is laying eggs, the female will often be seen to eat eggs almost as quickly as she lays them. They are truly a "mouth and stomach with legs".

And while they are a mouth and stomach with legs, at one point I fed my giant female frog a group of young longfin danios that had bent spines. She quickly ate all but one that had a slightly different color pattern than the rest. That fish lived in her tank for a year. She never ate it, even though she ate many, many other fish that were added to the tank. It was like she adopted it as a pet.

Finally, many years ago while I was working for Kmart, in the middle of winter we got in a shipment of houseplants. You know the kind – the large potted ones that sell for about \$10. Well, apparently a hitchhiker came in with the shipment – a green tree frog! I was walking through the store in the middle of the night after watching the snow coming down, only to find a young green tree frog jumping down the aisle! I was able to catch it and took it home. For the next several years, he lived in our bedroom in a special paludarium tank. His odd behavior? He loved mealworms, but would only eat them when we offered them to him on a golden colored measuring spoon! Put them in the tank and he looked at them but ignored them. Offer them on any other spoon and he would move away from the mealworm. But put them on that golden colored spoon and he would gobble them down right away. Talk about spoiled!

Our hobby is a lot of fun. One of the greatest things about keeping fish in glass boxes is just being able to sit down and watch their behavior. I was able to observe all of these strange behaviors because I spent time actually sitting in front of the tanks watching the fish and other critters. Don't forget to do that once in a while. You may be surprised at what you'll see!

Editor's Notes:

End of another year, but not enough room at the bottom of the page to thank all of the authors and people who print, collate, and mail the Darter separately. It's the club's publication and a true group effort. Thank you. Specific thanks this issue to Andy Walker for arranging reprint permission for the AGA article and photo and getting an electronic copy of the photo. Article Deadlines for 2011 Darters are Dec 15, Feb 15, Apr 15, Jun 15, Aug 15, and Oct 15.

Decapsulating Brine Shrimp Eggs

By Jessica Bullock

Reprinted from the October 2010 Bulletin of the Hamilton and District Aquarium Society.

Many hobbyists know that brine shrimp can be an excellent food for their fish. Newly hatched brine shrimp, nauplii, are often used to feed fry and smaller species. Although they are a fantastic food, nauplii take some time and effort to hatch, and new batches must continually be made. Brine shrimp eggs (cysts) can be decapsulated, a process which removes the outer shell, leaving only the embryo. This process can improve the hatch rates for old or low quality eggs, and can result in a convenient, ready-to-feed food.

Why Decapsulate?

- Improve hatch rates and reduce hatching time
- No cyst shells or unhatched cysts to potentially cause problems for fry
- Cysts are disinfected by the hypochlorite decapsulating solution, reducing the amount of bacteria, fungus, or parasites they may carry
- Decapsulated cysts are approximately half the size of freshly hatched nauplii
- Decapsulated cysts have higher energy content than nauplii because little to no energy is used for hatching

Equipment:

- Cone-shaped container (ie hatching cone)
- Aeration supply
- Brine shrimp eggs (cysts)
- Household bleach (Sodium hypochlorite 5-13%, no additives or fragrance)
- Brine shrimp net or sieve
- Salt (for storage)

1. Hydration

Brine shrimp cysts are dehydrated before being sold, putting them into a stage of diapause, or hibernation. Dehydrated cysts are dimpled and will decapsulate more effectively if they are round. This is achieved through hydration. Put the cysts in your hatching cone with about a cup of warm, fresh water. The aeration should be strong enough to keep the eggs in suspension. Wipe any cysts that stick to the sides of the container back into the water. Let the cysts hydrate for 60-90 minutes.

2. Decapsulation

Add 2 cups of bleach to your hatching cone, and watch carefully! The eggs will change colour over the next few minutes, and must be rinsed promptly once the process is complete. The eggs will change colour from brown, to white, to orange-brown, to orange. As soon as the cysts are orange, strain them into your net or sieve, and rinse until they no longer smell like bleach.

3. Storage

Rinsed eggs can be stored in a saturated brine solution for up to one month in the refrigerator. The brine solution is made by dissolving salt in water until no more will dissolve. Put your decapsulated eggs in a container with enough brine to cover them by at least half an inch. Keep these cysts in the fridge for 24 hours, then strain and replace the brine solution. This process dehydrates the cysts, helping them to store longer without ill effects. To feed, simply rehydrate eggs in warm, fresh water for 8-10 minutes.

4. *Hatching*

Decapsulated cysts can be hatched using the same process as for regular cysts. The main difference is that the decapsulated cysts will hatch in about 16-17 hours, and the decapsulated cysts will sink when the aeration is turned off. This means that hatched nauplii can be netted straight out of your hatching contained and rinsed for feeding. Aeration can be turned back on after harvesting and any remaining cysts should hatch within 4-5 hours. Unlike regular cysts, which require fresh hatching liquid per batch, the hatching liquid for decapsulated cysts can be used for up to 3 batches.

From The Fish Room

By Ed Millinger

I was talking to Ty Winkler about filtration (I know, what an exciting life I lead), and he asked if I had ever considered using a sponge in my corner filters. I use sponge and corner filters exclusively, powered by a linear air pump. In the corner filters I place a stocking full of peat (to soften the water) and filter floss (pillow stuffing). Buying the large bag of pillow stuffing is cheap but Ty was right, by inserting a sponge I only need a small amount to compensate for the area the sponge does not cover. Now a large bag of stuffing will last seemingly forever.

Speaking of corner filters, the one I use most is the large Lee's corner filter. The biggest problem I have had with them is the three prongs that hold the airline in place sometimes break off. I fixed this at first by adding an insert between the airline four inches from the three prongs. When I would clean the filter all I had to do was disconnect the airline and then remove the filter for cleaning. Even with this precaution I still managed to break off a prong or two. I found a solution by using a cap off a bottle of Nestle water (12 oz.) and placing it over the outlet. I then drilled a quarter inch hole in the middle for the airline and then eight or nine very small holes for the air to escape and pull the water through the filter. I tried this only to find out the quarter inch hole was too large and the airline would slip out. So now I use a smaller drill bit and move it around a little and this helps keep the airline contained.

Have you replaced your aquarium lights lately? I ask because it's easy to not notice the decline in intensity over time because it is so gradual. I remember once realizing that I had the same bulb on my seventy five gallon aquarium for at least eight years, This came to mind recently when I walked into one of the stores I call on and I realized right away that they had changed the lights. It makes a big difference, if not you can always put your old bulb back in.

MASI's good friend Ray "Kingfish" Lucas is fond of reminding us "have fun with the hobby." At the August auction you may this little bit of fun: Jim (Jr.) Miller was bidding against Derek Walker for a plant. Jim was standing up front near the auctioneer and Derek was standing in the back of the room next to Cory Koch. As the bidding progressed past nine dollars Jim shot a look to the back to see who he was bidding against. Derek laughed and kept bidding. When the bid reached thirteen dollars Derek decided to drop out, Jim figured the plant was his. Before the bidding closed however Cory bid \$14 and won the plant. Jim feigning disgust turned his back on the auctioneer. After Cory signed for the plant he handed it to Derek and said "Merry Christmas."

Remember it's a hobby not a job.

Fishkeeping and Aquascaping They Need Each Other

by Randy Carey

Reprinted from the Oct-Dec 2009 Aquatic Gardener of the Aquatic Gardeners Association, Inc.

At annual aquarium shows, I see things differently than most of my fellow club members. I feel the most important award is “Aquarium Beautiful,” while most others contend it is “Best (Fish) In Show.” But I argue, we are an aquarium society, not a tropical fish society! As we know, many aquarists focus only on the fish. The satisfaction of fishkeeping touches on collecting rare species, successfully breeding challenging species, and rearing fish into beautiful specimens for viewers to admire. When displaying these fish in sparsely aquascaped tanks, beauty is sought in the individual specimens, not through the entire composition that we call an aquarium. Yet even people with dry hands (non aquarists) readily recognize that something is missing. Given multiple viewing options, these casual viewers will gravitate to tanks that have interesting aquascaping framing the display fish—even if the display fish is less interesting. Simple aquascaping transforms a fish tank into an aquarium.

But it is easy for any of us to seize one niche in the hobby and focus on it to the point of overlooking complementary aspects. Much satisfaction in keeping plants is collecting the rare species, successfully propagating the challenging species, and growing specimens to jaw-dropping, perfect form. Of course, aquascaping takes aquatic plants to a higher level, and instead of focusing just on individual plants, appreciation is attained through the entire composition—plants and hardscaping.

Undoubtedly, those with dry hands will be drawn initially to the masterfully aquascaped aquarium. But if the fish are nondescript and play a background role, the viewer’s attention will not be held nearly as long as if the display contained an interesting mix of fish that showcase performances with bright colors, sparrings, matings, tight schooling and other niche behaviors. Now that is a fully visual aquarium.

Many aquarists seem to be divided into one of two camps: aquatic gardeners and fishkeepers. What if fishkeeping included more focus on the important role of aquascaping and plants, and what if aquatic gardeners extended their compositional skills to the selection and display of fishes? Aquascaping and fishkeeping should be two halves of the whole, two halves of what it means to be a complete aquarist.

As I was structuring the outline and content for my new book, *Tetras and Barbs* (see Box pg. 33), I recognized that for these fish groups the complete story had to embrace and promote aquascaping as a best practice. I just can’t condone keeping these fishes in bare or stark tanks. Not everyone will be willing to tackle the high tech approach, but good fishkeeping should expect some imagination with hardscaping and some reliance upon hardy plants like Java fern, Java moss and Anubias. And because tetras and barbs typically work well within a community, the book needed to invest some guidance in the selection of fishes for the home aquarium.

Why fishkeeping needs aquascaping

Similar to how Takashi Amano looks to nature for examples and inspiration for natural beauty, I seek natural function of the aquatic environment and the fish. The key lies in the microhabitats, not in an entire stream (or macrohabitat). While many species of fishes may be designated as living within any

given stream or macrohabitat, we find each species confining itself to a relatively stable and definable microhabitat. Most of the species we keep in aquaria are relatively small and peaceful. As these species self organize, they aggregate in fairly predictable conditions.

So what are the lessons of the microhabitat? First, it is natural for most of our small fishes to aggregate in communities with multiple specimens per species and with a compatible mix of species. Second, the self-organizing mix of species is compatible because each species lives, forages and breeds within minimally competing niches. Within each microhabitat are guilds, or minimally competing life styles that cohabitate with minimal pressure on the other guilds. Third, the presence and volume of a guild is typically tied to some feature of the microhabitat. It could be the type of substrate, the depth of water, or the current, but quite frequently it is associated with plants (riparian, floating, substrate anchored and barrier building). Finally, the more complex the microhabitat, the more guilds that emerge within the same self-organizing assembly of species.

Similar to how Amano seeks to replicate the beauty of nature, fishkeepers should replicate the functional connection of habitat with fish selection. In nature the fish are self-organizing. Within the artificial confinement of an aquarium the fish depend upon us to organize their numbers and species selection. And part of this balance is a requirement that we provide them with the aquascaped features that they prefer within a microhabitat.

Part of my research probed the concerns of fishkeepers. I quickly recognized one of the most common questions was how many fish and what selection of species can one fit into his/her aquarium. Aquarists, particularly new aquarists, have a natural urge to stock as many species as possible. One of the points I make is that the more complex the habitat (or the aquascaping) the more fish and species it will naturally accommodate.

For multiple reasons, I discourage the overly simplistic guideline of one inch of fish per gallon. Relying on lessons from nature, one should identify the noncompeting niches and estimate the amount of fish that can occupy each of these niches. One obvious example is that the choice and number of Danios should be based upon the amount of open mid-level swimming space, a decision independent of the choice of Corydoras and their preference for skimming over open substrate. Likewise, the presence and number of fish that cling to the security of plants should be based upon the amount and arrangement of aquascaped plants. When it comes to most small tetras, barbs and their relatives, it is aquascaping, and plants in particular, that is most critical to their well being as witnessed by their self-organizing choices in nature.

The tetras and barbs tank, and perhaps any community tank incorporating them, must be aquascaped. These are not bare-tank or gravel-only fishes. More often than not, plants

Tetras and Barbs

Tetras and barbs are among the most popular community fish, with dozens of species readily available in pet and aquarium stores. This comprehensive guide covers topics essential to aquarists interested in tetras and barbs such as feeding, water requirements, species, diseases and breeding. Full-color photos, sidebars, charts and tip boxes illustrate key points and complement the informative text. Paperback: 128 pages
Publisher: TFH Publications (est. January 2010)
ISBN: 0793816769

From the Author

“I didn’t follow the typical formula for a fish book. Yes, it contains serious content about these groups of fishes and breeding, but it also has a tandem of three chapters that builds upon themes for selecting species for a balanced community. “And I emphasize that aquascaping (at some level) is essential. I strongly encourage the planted aquaria—even if it is just Java fern, Java moss and Anublas. So in my “fish” book I am strongly tying in the importance of plants and aquascaping. The selection of fish species is much like aquatic gardeners’ focus on the selection of plant species.”

are the missing element to observing tetras and barbs in their natural behaviors and colors.

Why aquascaping needs fish

Beauty draws attention, but personality retains it. If an aquarium is to engage the interest of its viewer, it should have a personality that is observable and somewhat unpredictable. The aquarium should showcase a saga of actors as if a story is being told.

I'm taking a guess here, and perhaps skating on thin ice with aquatic gardeners. But I suspect that one reason aquascapers choose the fish species that they do is to keep the presence of the fish in the background. Could it be that some composers choose species that will not distract from their well-thought out aquascape? Is there a reason that the virtually colorless *Rasbora dorsiocellota* is one of the most commonly deployed rasboras? Why do we not see many tiger barbs with their bold barring and demanding presence? If this is the case, I can't argue with it. If the point of a display is to emphasize the aquascaping, then perhaps using fish in a background role is appropriate.

But for the casual aquarist, the intent of the home aquarium is to be visually compelling in whatever ways it can. This includes both its snapshot beauty (aquascaping) and its dynamic personality (as played out by the fish). With this as our goal, composition should not be an either-or approach. Fish don't contribute to an aquarium the same way plants do. They move. They move in relation to each other. Each species moves differently. They display behavior that balances between predictable and unpredictable. And as a community, they play out interconnected stories. And when thinking of the composition of fishes, we need to look at these different features.

When focusing on fish selection, we should maintain the basic concepts of visual design: theme, variation, contrast and balance. But what it is that we vary, contrast and balance? What can we learn from aquascaping when selecting fishes?

Consider that in Amano's compositions he seldom gives any accent more than 25% of a visual presence. This might be red leaves against green, the texture of wood against plants, the roundness of stones against jagged shapes, or the light color of open gravel amidst darker foliage. With fish, an effective accent can be a variation of behavior. Consider a composition limiting its visual impact of fish to 15% in tight schools against a backdrop of fish with more individual behavior, or vice versa.

Tetras, barbs and their relatives play various roles in contributing to a well composed visual aquarium. These roles lend themselves to be grouped in a meaningful and natural way. (Unfortunately, the book's initial submission of a full chapter on nearly 20 roles had to be reduced to a few pages. I hope to expound on these roles on the web site, TetrasAndBarbs.com.) Most obvious is appearance: like plants, fish vary in color, size and shape. But fish contribute what plants and hardscape cannot—behavior. The common perception recites that these fishes are “mid-water schooling” fishes. That

At one aquarium show I saw a beautiful entry that drew attention for its amazing plants—the variety, the quality, the challenging species... However, the tank included a powerhead that clouded the water with tiny bubbles from CO2 injection and heavy pearling. Worse, the strong current caused the fish to crowd in one corner, constantly treading water and seldom interacting throughout the tank.

In contrast, a much more modestly planted (but still fully aquascaped) tank had no distracting current. A school of tetras continuously flowed throughout the tank. A small group of danios playfully sparred as a pack that drifted about. The single *Puntius denisonii* periodically emerged from the background plants and upstaged the other fish (and aquascaping), rewarding viewers like a cuckoo clock. This was not just a collection of fishes, it was a community with multiple story lines. The display was enlivened with animated personality.

perception is overly simplistic and generic. Variations of behavior can be grouped three ways:

- fish-to-fish (schooling, pack, shoaling, loaners, territorial, predators)
- as a social catalyst within the community (dither, target)
- niches (strata, proximity to various aquascaping elements, water current, nocturnal and contributing to biotope/habitats themes)

Ultimately, the weight of both appearance and behavior can classify fish into compositional roles (showcase specimens, background fish, accent/contrasting and novelty). As a quick example, let's look at the five-banded barb (*Barbus peitazona*). It contributes patches of fairly intense red, distinct vertical marks; a preference for actively swimming in the open but near the refuge of plants; and “pack” behavior (a group of fish that drift about the tank as a pack with ongoing interaction that is fairly intense in contrast to the unison of tight schooling). Its bold markings contrast both with horizontally—lined species (such as *Rasbora borapetensis*) and the green plants behind them. This species also contributes as a natural addition to a soft—water habitat and to the Malaysian biotope, should either of these be a theme of the composition. The contribution of these roles should be evaluated when composing for theme, variation, contrast and balance. Much more easily said than done.

Aquariums are about the satisfaction that its keeper gets from keeping it. That satisfaction may come from plants or it may come from fish. As a result, the practices of aquarists can range from high-tech aquascaping to breeding fish in bare tanks. Aquariums are also about the visual beauty of the whole. If this truly is the goal of an aquarist, he or she should leverage both plants and fish.



This 165L (44 gallon) tank is fully planted and aquascaped yet still has a lively assortment of fish. Fish include cardinal Tetras, Blue Ram sp., Cold Ram sp., Black Phantom Tetras, Bentosi Tetras, Siamese Algae Eaters, *Otocinclus vittatus* and Silver Hatchetfish.

“Colors of Nature” copyright Kam Wong, Happy Valley Hong Kong. 3rd Place 2007 AGA Aquascaping Contest Aquatic Garden Medium

FISHES as DISHES

Patrick A. Tosie, Sr.

We all love our fish! This column will be dedicated to using our fish for something tasty to enjoy. Try it, you may like it. If you have leftovers, bring it to a monthly meeting for others to enjoy.

Grilled Tuna and Balsamic Glaze

Ingredients:

6 tablespoons white wine
1 cup balsamic vinegar plus
2 tablespoons balsamic vinegar
2 tablespoons sugar
1 teaspoon freshly ground black pepper
1 ½-pounds ripe fresh tomatoes cut into 1/2-inch dice
2 teaspoons olive oil
2 teaspoons salt
¾-pound haricots verts or green beans, stem ends trimmed
1 teaspoon fresh lemon juice
6 (6 ounce) 1-inch-thick fresh tuna steaks
¼-cup loosely packed basil leaves, very thinly sliced

EAT MORE



FISH

Directions:

Combine wine, vinegar, sugar, and ¼ teaspoon pepper in a small saucepan over medium-high heat. Simmer until slightly thickened and syrupy, 25 to 30 minutes. Remove from heat, and set aside.

Combine tomatoes, 1-teaspoon olive oil, ½-teaspoon salt, and ¼-teaspoon pepper in a medium bowl. Toss, and set aside.

Heat grill to medium hot. Combine haricots verts, lemon juice, remaining teaspoon olive oil, ½-teaspoon salt, and ¼-teaspoon pepper in a bowl; toss well. Arrange beans on the grill and cook, turning, until just limp and lightly charred, 2 to 4 minutes. Transfer to a serving platter.

Sprinkle remaining teaspoon salt and ¼-teaspoon pepper on all sides of tuna steaks. Brush wine-and-vinegar mixture on tops and sides of steaks and place, glazed side down, on grill. Grill, brushing with more glaze, until lightly charred, about 3 minutes per side for rare, 6 to 7 for well done. Transfer to serving platter with beans. Add basil to tomatoes, toss, and spoon over tuna. Serve immediately.

BAP Report

Steve Edie

Member	Species	Common	Pts	Total
<u>Sept 2010</u>				
Marc & Kathy Daly	<i>Nomorhamphus ebrardti</i>	Orangetail Halfbeak	10	639
Mike Hellweg	<i>Betta simplex</i> *@	Scimitar Betta	35	4109
Mike Hellweg	<i>Danio aesculapii</i> *	Panther Danio	15	4124
Mike Hellweg	<i>Hemigrammus rodwayi</i> *	Gold Tetra	20	4144
Mike Hellweg	<i>Trichogaster leerii</i>	Pearl Gourami	10	4154
Jerry Jost	<i>Skiffia francesae</i> "Rio Teuchitlan" @	Golden Skiffia	40	935
Cory Koch	<i>Skiffia multipunctata</i> @		40	1437
Cory Koch	<i>Synodontis lucipinnis</i>		15	1452
Tony McMillan	<i>Limia vittata</i>	Cuban Limia	5	124
Jim Miller	<i>Limia caymanensis</i>		5	2329
Jim Miller	<i>Limia tridens</i>		5	2334
Jim Miller	<i>Poeciliopsis prolifica</i>		5	2339
Pat Tosie	<i>Neoheterandria elegans</i>	Tiger Teddy	15	3372
Pat Tosie	<i>Xenophallus umbratilis</i> "Arenal Volcano"		15	3387
Kurt Zahringer	<i>Limia</i> sp. "Tiger"	Tiger Limia	5	165
<u>Oct 2010</u>				
Cory Koch	<i>Ctenochromis horei</i> **		25	1477
Cory Koch	<i>Simochromis diagramma</i> "Isanga" **		25	1502
Pat Tosie	<i>Poecilia</i> sp. "Para"		5	3392
Derek Walker	<i>Herichthys carpintis</i>	Green Texas Cichlid	10	1529
Derek Walker	<i>Limia caymanensis</i>	Grand Cayman Limia	5	1534
Derek Walker	<i>Limia melanogaster</i>	Blackbelly Limia	5	1539
Derek Walker	<i>Goodea luitpoldi</i> "Laguna Opopeo, Michoacan" *		20	1559
Derek Walker	<i>Zoogoneticus tequila</i> @	Crescent Goodeid	30	1589

* = First MASI species spawn (5 point bonus)

** = First MASI species and genus spawn (10 point bonus)

*** = First MASI species, genus and family spawn (15 point bonus)

@ = C.A.R.E.S Species at Risk (Double base points)

= Species previously submitted = 0 points, except for C.A.R.E.S. = base point bonus

^ = Species previously submitted, limited points for additional color varieties

Sources:

Cal Academy - <http://research.calacademy.org>

CARES - <http://www.carespreservation.com>

Store Review - Aqua-World on Gravois

by Kathy Deutsch

Aqua-World is a St. Louis institution. Located in South City, it is easy to find and tough to leave.

I really liked the atmosphere-with many show tanks and special lighting. When I walked in it felt like an interesting exhibit place, rather than a retail store. I wanted to wander around, just enjoying the large tanks with groups of fish.

Around the corner were the tanks of fish for sale. Long rows of clean tanks, each with a plant or two, and a type of fish. They were well-lit and well-labeled. The selection was good; a few unusual corydoras caught my eye. This is not a bargain store, but the prices were fair and the quality of the fish was great.

What I really liked were the gentlemen behind the counter. They were easy to talk to and knowledgeable. They never pushed me into buying, just answered the questions I had and made suggestions. It is obvious they enjoy where they work, and love fish.

There was a really good selection of supplies, food, and new/used tanks.

Aqua-World reminded me of the best fish stores of my youth. It felt like a trip to an aquarium.



An expanded line of MASI Logo merchandise is now available from Café Press. Derek Walker has picked up management of the site and added many new items. Pick from T-shirts, jerseys, caps, tote bags, coffee cups, and more.

Go to www.cafepress.com/MissouriAquariumSociety to view and order the merchandise.

HAP Report September - October 2010

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Andy Walker	Hydrostemma longifolium	Barclaya	IB	20	475
Kathy & Marc Daly	Colocasia esculenta illustris	Imperial Taro	OB	15	320
Kathy & Marc Daly	Ludwigia sediodes	Mosaic Tile Plant	OB	5	325
Tony McMillan	Ceratophyllum demersum	Hornwort	V	5	365
Tony McMillan	Thalia dealbata	Thalia	V	10	375
Derek Walker	Anubias hastifolia sublobata*		V	15	2870
Derek Walker	Fontinalis sp. Missouri Moss		V	5	2875
Derek Walker	Potamogeton pusillus	Baby Pondweed	V	10	2885
Derek Walker	Vallisneria spiralis leopard	Leopard Val	V	5	2890

Reproduction Key: V = Vegetative, OB = Outdoor Bloom, IB = Indoor Bloom, S = Seedling

* = MASI First

Member Classifieds

Turn your old Lionel and American Flyer trains into fish money. Call Marcus Daly 962-5260 or call Kathy Daly.

I have bloodworms and brine shrimp. Brine Shrimp eggs \$32 for 16 oz. can. I am looking for a 200 gallon tank. Jim Miller, 314-638-1134.

Charles Harrison (314) 894-9761, csharrison@inkmaker.net -

Thiosulfate crystals (Chlorine Remover)	\$3.00 a half pound
OTO double strength Chlorine/Chloroamine test kits - 4 ounce -	\$12.50
Flubendazole, 5% powder 10 grams	\$5.00, 25 grams - \$20.00
Lavamisole HCl Powder - 5 grams treats 100 gallons	\$10.00
Methylene Blue 5% solution (2 ounces)	\$12.75
Acriflavine Concentrate (4%) solution, 2 ounces	\$12.70
Bromthymol Blue pH test solution, 4 ounces	\$7

Wanted: Small Styro shipping boxes - 12 x 12 x 12 or a little bit smaller. If your company uses them and throws them away, save them! Bring to the meeting or I'll come pick them up. Mike 636-240-2443

MASI Members can place a classified ad in the Darter for free. Ads may be up to 30 words in length. Send your ads to the editor. The ad will run for one issue unless you specify how long to run it, in which case it will run as requested.

2010 MASI Membership Roster

Ron Huck

Membership information removed for electronic distribution.

The Computer Page

Steve Deutsch

MASI's official web page: www.missouriaquariumsociety.com

MASI's email group: MASIFishHeads Yahoo Group - see web site for joining instructions

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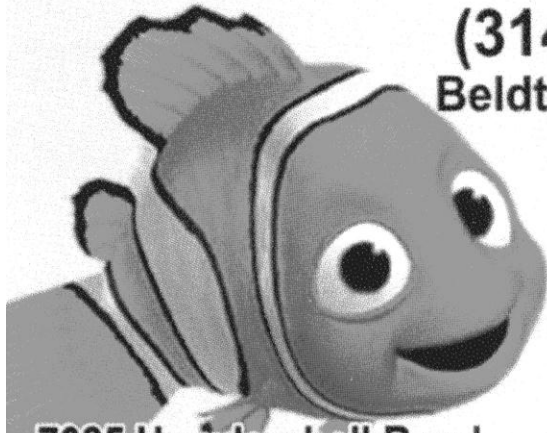
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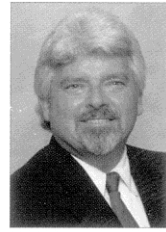
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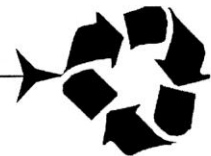
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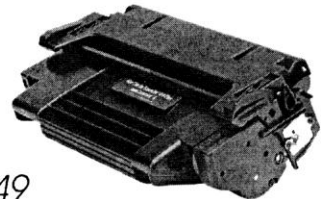
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