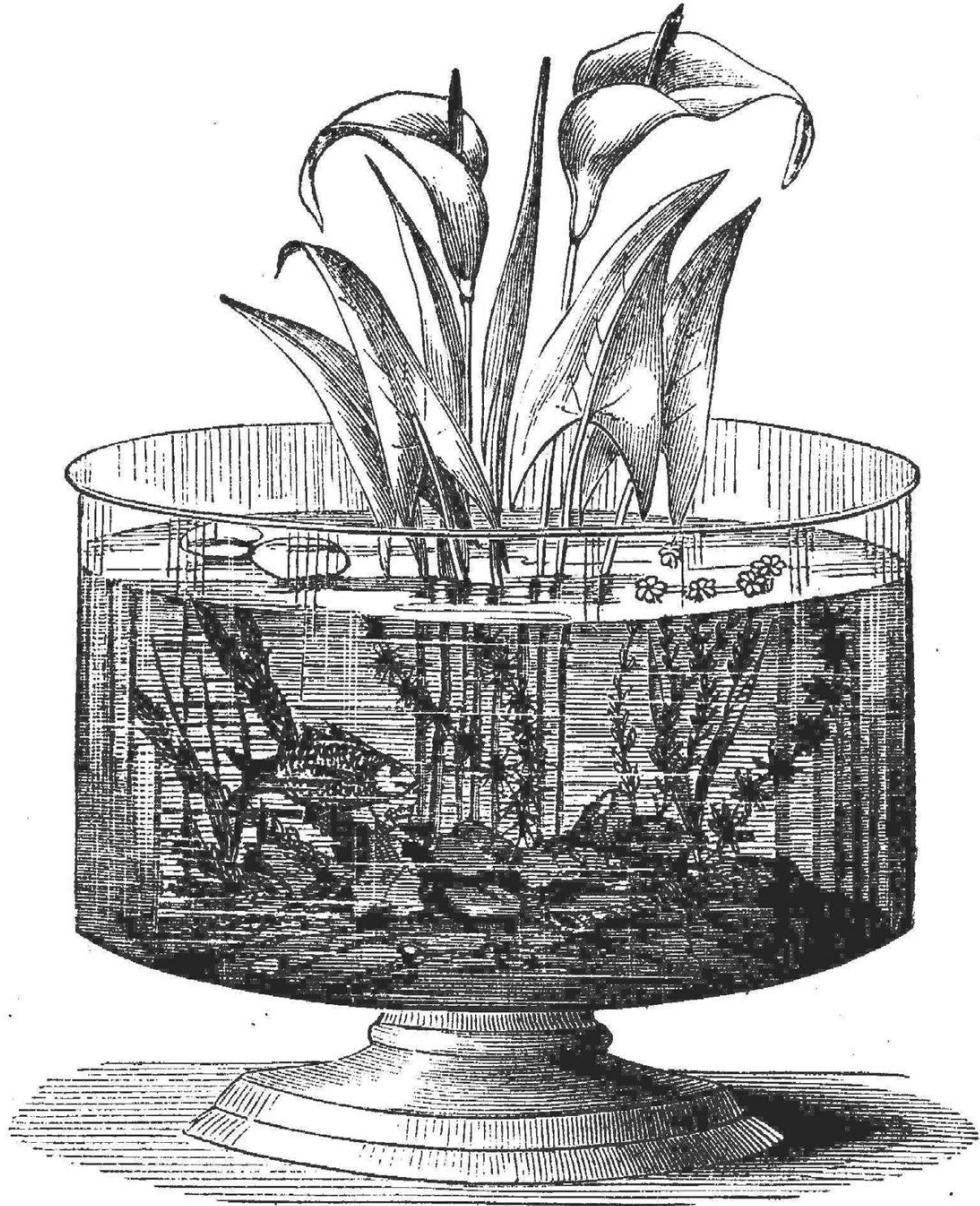


THE DARTER

March - April 2007



The Aquarium.

Missouri Aquarium Society, Inc
St. Louis, Missouri

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Places to Be Things to See

THURSDAY April 19, 2007

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

SATURDAY April 21, 2007

Workshop @ Jost Chemical

SUNDAY April 22, 2007

Auction, 12:00 @ the Stratford Inn

Contact: John Van Asch – 618-277-6165, johnsfishy@att.net

SATURDAY May 5, 2007

Executive Council, 7:30, hosted by Kathy and Steve Deutsch

THURSDAY May 17, 2007

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

SATURDAY June 9, 2007

MASI Picnic, Jim and Brenda Thale's, Executive Council after picnic

THURSDAY June 21, 2007

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

SUNDAY August 19, 2007

Auction, 12:00 @ the Stratford Inn

Contact: John Van Asch – 618-277-6165, johnsfishy@att.net

SUNDAY October 7, 2007

Fall Swap Meet, Noon to 3:00 @ the Stratford Inn

SUNDAY November 18, 2007

Auction, 12:00 @ the Stratford Inn

Contact: John Van Asch – 618-277-6165, johnsfishy@att.net

Presidential Preamble

By Mike Hellweg

The Annual Workshop is almost here. Jerry and his crew have put together a great lineup of speakers for this year's event. Best of all, it's free to all of you! This is a great chance to come visit with fellow club members, talk fish, learn about the hobby, and have fun. Plus you'll get to see some truly beautiful planted tanks.

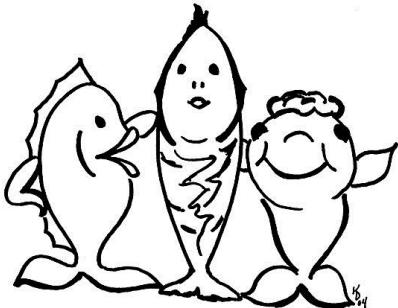
You may be thinking something like: "I'll skip so-and-so's talk because I'm not interested in those kinds of fish". I'm guilty of doing the same thing myself. But you know what? I've actually learned more in talks about fish or aquarium related topics that I thought I would not be interested in than those that I am interested in! One of the most interesting talks from which I learned the most and still remember to this day is one on "fish nutrition". How boring could that be? Well, not only was it not boring, but I still use things that I learned in that talk to this day nearly a decade later!

Don't miss the Annual Awards Banquet on Saturday night. We've got a special treat for dinner from a great CWE restaurant called MoMo's. After dinner, we've got a nationally known PROFESSIONAL speaker, Randy Carey, speaking on Project Piaba and the Rio Negro. Randy spent a couple of weeks working with Project Piaba along the Rio Negro last year, and is now their spokesperson here in the US. Project Piaba is led by a group of scientists and is trying (and succeeding) to protect the forests by helping the people living there to find sustainable ways of using their natural resources to earn a living. It's been going and growing for over 15 years now.

In other news, monthly bowl shows are back with a renewed vigor! Check your Darter for a list of monthly bowl show classes and show off your fish. We now have an annual award for showing in the bowl shows, but to win it you have to participate. You win by total accumulated points – the one with the highest total at the end of the year wins. You earn one point for each entry up to 5 entries per month, and 5 points for a first place win, 3 points for second place, and 2 points for third place. Give it a try – you might be surprised how well you do! And you don't even have to have a bowl, those small 'critter tanks' with the snap on lids work just as well.

Finally, congratulations are in order for our Treasurer Steve Edie, recently appointed to the Board of Trustees of the American Cichlid Association. I bet you didn't even know that several of our members are now or recently have been on the Boards of Directors of several national organizations! MASi really is a big-time club with a lot of nationally known members. How would you learn about this and get to know them? All you have to do is show up to meetings, talk to people, and participate! That's what it's all about. I hope we see you at the meeting next month.
...and for now, 'nuff said...

Membership - Renew Now



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 our membership chair, Kathy Deutsch at 314-741-0474, katfish@i1.net, or 9 Old Jamestown Ct. Florissant MO 63034

February Bowl Show Results

I think the extreme cold kept many from bringing their prized fish this month!

Class: Sharks, Loaches, Eels, and Oddballs

Entries: One - Entrants: One - Judge: Mike Hellweg

Rainbow Shark, Marlon Felman, First Place

Class: Open

Entries: Three - Entrants: One - Judge: Mike Hellweg

Female Arnoldichthys spilurus, Jim Miller, Third Place

Male Pineapple Swordtail, Jim Miller, Second Place

Spectacular Male Arnoldichthys spilurus, Jim Miller, First Place

I hope we see more entries in the classes as the weather improves!

Respectfully submitted,

Mike Hellweg, substituting for Diane Brown, Bowl Show Chair

April - Killies

May - Characins: Tetras, Pencilfish, Piranhas, Pacu, Silver Dollars, etc.

June - Catfish

July - Livebearers

August - Anabantoids: Bettas, Gouramis, Ctenopomas, etc.

September - Rainbowfish

October - Aquatic Plants

November - Aquatic Critters: Aquatic Invertebrates, totally aquatic amphibians (Pipid frogs/toads, Caecilians)

You must show in at least 7 monthly Bowl Shows to compete for the new Annual Bowl Show Champion Award.

THE ANNUAL CONVENTION OF THE AMERICAN LIVEBEARER ASSOCIATION
APRIL 27, 28, 29
HOLIDAY INN SELECT HOTEL
CLEVELAND, OH (STRONGSVILLE)

7 WORLD RENOWN SPEAKERS
GIANT FISH SHOW AND AUCTION
FISH SALES & DRY GOODS VENDORS
15 MIN TO ROCK-N-ROLL HALL OF FAME
LARGE INDOOR POOL
FREE AIRPORT SHUTTLE
www.livebearers.org

Member of the Year Nominations

Member of the Year Nomination - Diane Brown

Diane has been one of our most tireless and generous members since joining MASi a few years ago. She has served on the Executive Council for several terms. She serves as our Bowl Show judge at our monthly meetings. She helps with our monthly BAP/HAP auctions as well as working the tables at our major fuctions. When she brings fish or plants to our auctions, she generously declines the club split and makes full donation to the club. Very few people do this. She is always willing to give fish fry, plant cuttings, or live food cultures to visitors to her fishroom. Living in an apartment, she specializes in smaller aquaria, and they are always immaculate. Diane is truly an asset to our club and our hobby.

Member of the Year Nomination - Dave Rush

Dave is one of our hardest "behind the scenes" workers. As a member of the Dorsett Village Baptist Church, he was instrumental in making the arrangements for us to hold our monthly meetings there. Our previous meeting place, the Holiday Inn, had gotten so expensive that our treasury was suffering just to stay up. In just a few years, we are now financially healthy. Many people don't realize the work that Dave does before and after each meeting. He arrives early and sets up the tables at the front of the room and rearranges the chairs. After the meeting, after all of us have left, he puts all of the tables and chairs back, cleans up after those of us who didn't clean up after ourselves, turns out the lights and locks up the church. It's a responsibility he takes seriously - for MASi and his church.

Editor's Notes

Steve Deutsch

We have a first for my time as editor - I could not fit everything into the 32-page format we have been using, and had to add two more pages. I still did not get the rest of Klaus' article in, so we will have a part 3 coming. We have articles from five of our members in this issue. I did not use any exchange articles or any of the livebearer articles Mike has allowed us to reprint from the ALA, so we have more to come there, too. I hope we can keep it up!

Charles is trying a different printer and asked for some pictures this time. Mike Hellweg provided an illustrated article, but no photographs yet. Maybe we will try that next issue. If you submit something, remember it should be your own, or you should have permission, or it should be so old all copyright has expired. I'm trusting Mike and Lee Finley on that last part (does that pique anyone's interest?)

Gary McIlvaine wants to profile some of our members and their interests, accomplishments, and 'tips and tricks' for future issues. This general idea has come up before, but now we have an author who wants to pursue it. Please help Gary and the rest of MASi by sharing your take on the hobby with the rest of us.

Article deadlines are April 15 (you have until the 17th this year for taxes, so you can send that article and then start them), June 15, August 15, and October 15.

M A S I ANNUAL WEEKEND WORKSHOP/ GIANT AUCTION CO-SPONSORED BY THE St. LOUIS AREA KILLIFISH ASSOCIATION

SATURDAY AND SUNDAY, APRIL 21 & 22, 2007

WORKSHOP LOCATION: JOST CHEMICAL CO., ST. LOUIS, MO

AUCTION LOCATION SUNDAY: STRATFORD INN, FENTON, MO

KILLIFISH BOX SALE AND DISPLAYS SATURDAY at the WORKSHOP- OPEN 9:00 AM

SATURDAY SPEAKERS FEATURING:

10:00 AM- JERRY JOST- "PLANT NUTRITION"

A summary of what some of the major plant gurus are saying about feeding aquatic plants. This is an attempt at taking some of the confusion out of all the seemingly conflicting information out there from various experts.

11:30 AM -MIKE HELLWEG - *Apistogramma* - a Lot of Cichlid in a Small Package

This talk introduces the colorful and interesting Dwarf Cichlids of the genus *Apistogramma*, with emphasis on Mike's experiences with their care, behavior, breeding and raising the fry. It covers most of the commonly available species, and several of the more challenging species, as well as some of the newer species just coming in to the hobby.

1:30 PM- TERRY FAIRFIELD- FISH HEALTH

Aquarists and author, Terry Fairfield, is author of Barron's A Commonsense Guide to Fish Health. He will be speaking specifically on preventing diseases in our aquaria.

3:00 PM- DAVID RAMSEY- FISH BREEDING

David has filmed and will show a number of fish in the act of spawning. These are excellent videos and David has some excellent tips on breeding fish. Some of the videos include Badis ruber, corys, angelfish, and bristlenose ancistrus.

6:00 ANNUAL AWARDS BANQUET FEATURING RANDY CAREY

Randy will discuss *Project Piaba* , a project established to understand the ecological and cultural systems of the middle Rio Negro basin, Amazonas, Brazil, in order to conserve and maintain the live ornamental fishery at a commercially feasible, and an ecologically sustainable level.

**SUNDAY 12:00 at the STRATFORD INN, FENTON, MO - GIANT ALL-SPECIES
AUCTION FEATURING LOCALLY RAISED FISH, AQUARIUM PLANTS,
EQUIPMENT, TANKS, AND MORE!**



2007 Annual Show Banquet Registration Form

Cost is \$25.00 per person

Catered by: Momos Ouzaria Taverna

Location: Lobby of Jost Chemical Co., 8130 Lackland Road, St. Louis, MO 63114

Time: 6:30 PM, Dinner 7:00 PM

After Dinner Program: Randy Carey "Project Piaba and the Rio Negro"

Name: _____

Total Number in Party: _____ x \$25.00 ea = Total Cost: _____

Auction Credit: _____

Total Cost less Auction Credit = Amount Due: _____

*Please make checks payable to **MASI** and send to:*

MASI Banquet Registration
Steve Edie
5 Green Ridge Court
St. Peters, MO 63376

Banquet Registration due by Thursday, April 19, 2007

The Expedition - Part 2

By Klaus Bertich

José has every thing ready to go on to the first nights stop over. It was almost dark when José made the turn north into the Uaupés River. Just another hour and we'll be at my cousin's hotel with deluxe accommodations. Hot water, regular food, a nice bed Jerry was thinking, Bill and Jack were thinking local food, a band, some local drinks and who needs sleep. They could sleep in the boat tomorrow. Jose pulls into a boat slip and is greeted by a young, beautiful, curvaceous, vertically challenged, woman. Hey fellows I'd like you to meet my cousin, Maria Vargas says José. She will be our host tonight, and on the way back we will stop by here again. The hotel is at the end of the dock and up the stairs, says Maria; my son will take you to your rooms. Welcome to my house gentlemen, she says as she gives them all a huge hug, fish people do this. I've noticed this strange habit at most of the fish club meetings. Must be a fish club thing.

Everybody hungry? She asks. Everybody said they were about starved. We will meet in the cantina shortly, I have a new band tonight Jack I think you will like their music. The food was very good, steak with potatoes, and green beans, at least that's what Jerry thought it was and he didn't ask this time. The music was excellent and Jack has his second find of the trip. The name of the band was "Quitus" (kitos) and they played pipe pan music, with a little drum and guitar thrown in. They are awesome, Jack tells Maria after dinner. They could play almost anything. Jerry was so enjoying his after dinner drink. He sometimes had a drink after dinner at home and he had already had two tonight. It was late and Jerry excused himself and went to his room. See you guys in the morning he says. Bill and Jack sit and talk fish and hoist a few more before they also get off to bed. They don't stay up to late, only till 4:30. I've heard rumors that fish people do that also, they get to talking about their fish and before they know it the night's gone and it's time for breakfast. Breakfast was early and quick, they were in the boats before they knew it. Bill had driven one of the boats yesterday and he asks Jerry if would mind driving today, why not Jerry said. Jerry had a fishing boat at home and with a little instruction they were on their way. A short time later finds Bill and Jack dozing in the boat. Kind of a do it yourself vacation; I'm to understand that fish people do that to. Pay a lot of money and then do all of the work just so that they can collect some fish that nobody else has, strange, I myself would never do something like that, yea right. The trip goes well enough on this, the third day. Lunchtime finds our friends having a cold lunch. Maria had made some sandwiches and sent along some local drinks. The Uaupés river starts out anywhere from a quarter to a half mile wide at it's junction with the Rio Negro river, but it soon narrows down to less than fifty feet wide in most places. The water here is slow moving here as the landscape is more or less flat. A lot of small streams feeds the Uaupés river and along these small steams is where our three some will be doing most of their collecting.

About two hours after lunch José pulls the lead boat into a small stream and ties up to a dock just off the main stream. Behind the dock is a small village. When the kids in the village see the boats they all come running to see who has come. They see its Bill, Jack and a new Americano. They have all seen Bill and Jerry before. They all help off load the boats and get our three friends settled in. After a while the headman, Ohata Mifanis comes over and holds council with them. (A council meeting?) What kind of fish are you looking for he asks? Well Ohata, what we really wanted was some small Angelfish you know like the kind we got here last year, says Bill. Ohata nods and says, "Tomorrow we will go, but now we eat". Jerry was thinking, is this all this country does is eat. But Ohata was not thinking of just food, but a little celebration, something special for his friends. It was all laid out for them in the

middle of the village. Ohata knew they were coming and everything was ready. A pig had been roasted, and there were some other local specialties Jerry hadn't seen yet. A little local music and dancing was order for later. Jack might get some more music here. Jerry couldn't wait he was hungry and the roasting pig made his mouth feel like a waterfall. An hour later finds our three friends sitting around a fire and eating. Now Jerry wasn't asking to many questions any more and all the better. The eating, the dancing took it's toll on everybody and morning would be here, soon enough for all.

The next morning the guys are each in a small, flat, pole powered boat and Ohata is in the lead boat. They go to a spot and with a glass bottomed bucket (looking bucket) they find some nice *Pterorhynchus Altumnus*, or Deep Angels. They catch about fifty small dime sized fish and move on to the next site. Ohata takes them into another small pool of the main stream and they find the *Sympodus discus*, also known as the Heckelie discus. The water here is quiet and a little on the dark, black water says Jerry to Bill. Bill had read on black water but it looked more impressive in person. The water here had all kinds of vegetation from the *Echinodorus* family of plants, and plants to numerous to mention. The Amazon swords here grew close to shore and they were just huge. Jerry had nice plants at home, but not as nice as these. Bill had his mind on the fish at hand and wasn't paying to much attention to Jerry. He had his eye some kind of a rock on the bottom. It was shiny and Bill thought it would make a nice addition to his tanks at home. He scrunches down in the water and slowly reaches for the rock, keeping his head and hat above water, can't get that hat wet you know. He had gotten the hat on another collecting trip he had made to Australia. He has captured the rock for just a second, when all of a sudden it wiggles and his hands feel like they are on fire. Like a thousand needles sticking him. He yells, Ohata is close by and pushes Bills hand under the water for a few seconds and then lets his hand back up. What the hell was that. Hot fish, Ohata says. Looks like shiny rock, feels like rock, then feels like fire, hot fish. Hot fish, never heard of such a thing Bill says as he rubs his hands and noticed that the burning had gone away, almost as fast as it came. Ohata says, "If you don't believe it go pick up another rock". That's O.K., says Bill. Jack calls to Ohata to come and look. I think I've found some Heckelies. I'll need some help netting a few. He really didn't need any help netting them but it would be better if they all were around the fish. The fish won't be chased as much and they will a lot less stressed this way. Well Jack slowly goes into the weeds and puts his net down. In his other hand he has a boat paddle. The boat paddle is put into the water as far back as Jack can reach and then wiggled a little. The Heckelies come out as planned and Jack has a few. Slowly he brings the net to the surface and looks at the catch. Not bad for the first Heckels. They net a few more and decide to put the fish up before they get stressed out. They come back to the water a short while later and Bill is looking for that rock again, he finds something shiny in the water but this time he uses his net. He brings the rock to the top and looks at it. Ohata was right it is a fish. It was moving very slowly, you could just see the gills moving. Bill extends his finger to touch just the top of the fish's head, right between the eyes. Bad move Bill thought as he saw the fish flip up and onto his forearm. Just as before it felt like fire and when he put his arm under water it went away, and all was fine. Hey Jack did you see that fish I just had in the net. Yea, Bill I saw it but what the heck is it. Ohata says it's a hot fish. It burns like heck till you put the part of your body that it hit back into the water, and then the burning just disappears. Well these fish are not what we came after but if we have room enough we'll take a few of these along. The fish they had come across as it turns out is actually the Hot Cichlid, *Trimaculatus brnryrhndis*.

... to be continued

How I plan to be a better Hobbyist in 2007

By Gary McIlvaine

It's that time of year again, another year has passed and I am reflecting on the passing year. I set some goals for myself last year in regards to my fish keeping. I accomplished those goals and thought I would continue with my prior goals of successfully breeding a new (to me) species/ color strain a month to turn in to the BAP. The other goal I set for myself was to continue writing articles for the Darter. This fellow members is where I would like your help. Sometimes I struggle to figure out a good article, and I would like to continue writing for the Darter.

I was thinking tonight how best to accomplish this and I will need your help. I would like to start a column in the Darter. My goal would be to do a "Meet The MASi hobbyist". I could come to your fish room and survey it and report in my own words, that which I found. I would also submit it to you to look over before I submit it to the editor. The reason I do want to do this is two fold, I think it would be fun for me and the hobbyist I interview, and two I believe it will enable me to share more information with fellow hobbyists about our members. I am always amazed by the little things I pick up interacting with the members of the club. This would in fact be what the majority of the article will be about.

One thing that makes me more successful with my hobby is learning the tricks to success that others have already learned. I also have noticed that some of the best things that I have learned from others are the things I did not even know that I did not know. One excellent example of this kind of knowledge is something I learned during the "Three Amigos Presentation". Mike Hellweg was showing off a Tom brine shrimp continuous hatch and feed system and was talking about how he used it to feed his Sea Horses. I think we have all seen products in our time as fish keepers that later we can not believe we bought it, because it really doesn't work. Well after I heard Mike explaining that the gadget really did work I bought one for myself. Mind you I had NEVER seen this product for Sale anywhere, or even knew that I really wanted one for myself.

I now own three of them and let me tell you why it is a really neat product. I work a full time job, and have two small kids, and one of the things I always struggle with is my feeding routine, as my other obligations take precedent (at least most of the time). This little gadget is great to put in a fry tank, and it continuously releases live baby brine shrimp. I also supplement other foods to my fry tanks, but I never have to worry about rushing to the fish room to feed fry. I do feed my fish very well, usually 2-3 times a day, but some days I only make it down the fish room to feed once. This neat little gadget enables my fry to eat all the time!! And I can tell you it REALLY makes a difference in fry mortality as there is always a fresh baby brine shrimp slowly being released in my tank. I also am growing out fry much more rapidly with the help of this neat little gadget.

I need a volunteer for the May/June Darter so please let me know if you would like to volunteer. This is how I plan to be a better Hobbyist this year. The sharing of information that we really did not even know that we wanted.

Club Hopping

Steve Edie

April 14 – Cincinnati, OH: Greater Cincinnati Aquarium Society – Auction

April 21-22 -- St Louis, MO: Missouri Aquarium Society – Annual Workshop

April 27-28 – Cleveland, OH: American Livebearer Association – Annual Convention

May 25-27 -- Milwaukee, WI: American Killifish Association -- Annual Convention

May 25-27 – Chicago, IL: Greater Chicago Cichlid Association – Cichlid Classic

June 8-10 -- Raleigh, NC: North American Native Fish Association – Annual Convention

June 23 -- Indianapolis, IN: International Betta Congress – Annual Convention

June 23-24 – St Louis, MO: St Louis Water Gardening Society – Pond-O-Rama

July 18-22 – Sacramento, CA: American Cichlid Association – Annual Show

Aug 19 -- St Louis, MO: Missouri Aquarium Society – Auction

Sept 21-23 – Des Moines, IA: Midwest Cichlid Association – Annual Show

Oct 7 -- St Louis, MO: Missouri Aquarium Society – Swap Meet

Oct 13 -- Cincinnati, OH: Greater Cincinnati Aquarium Society – Auction

Oct 13-14 -- Kalamazoo, MI: Southwest Michigan Aquarium Society - Workshop

Oct 21 -- Milwaukee, WI: Milwaukee Aquarium Society – Auction

Nov 16-18 -- Cleveland, OH: Ohio Cichlid Association – Cichlid Extravaganza

Nov 18 -- St Louis, MO: Missouri Aquarium Society – Auction

April 11-13, 2008 -- Hartford, CT: Northeast Aquarium Council – Annual Convention

Jul xx, 2008 – Atlanta, GA: American Cichlid Association – Annual Show

Oct xx, 2008 – Laurel, MD: All-Aquarium Catfish Convention – Convention

**R&J
FISH
FOOD**

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314-638-1134**

BAP Report

Steve Edie

Member	Species	Common	Pts	Total
Jan 2007				
Diane Brown	<i>Pseudocrenilabrus multicolor victoriae</i>	Egyptian Mouthbrooder	10	120
Mike Hellweg	<i>Nomorhamphus ebrardtii</i>	Orange Fin Halfbeak	10	2597
Mike Hellweg	<i>Xiphophorus helleri guentheri</i> *	Gunther's Swordtail	10	2607
Cory Koch	<i>Hemichromis lifalili</i>		10	410
Gary Lange	<i>Chilatherina campsi</i> *		15	1329
Gary Lange	<i>Limia vittata</i>		5	1334
Gary Lange	<i>Melanotaenia parva</i>	Sunkist Rainbow	10	1344
Gary Lange	<i>Melanotaenia splendida inornata</i> "Anniversary Creek" *	"Anniversary Creek" *	15	1359
Gary Lange	<i>Melanotaenia trifasciata</i> "Wonga Creek" *	"Wonga Creek" *	15	1374
Gary Lange	<i>Pseudomugil cyanodorsalis</i>		10	1384
Gary Lange	<i>Puntius ticto</i> *		15	1399
Micky Lee	<i>Xiphophorus</i> sp. "Domestic Swordtail"		5	35
Gary McIlvaine	<i>Poecilia latipinna</i>	Sunburst Sailfin Molly	5	216
Gary McIlvaine	<i>Poecilia reticulata</i>	Red Delta Guppy	1	217
Gary McIlvaine	<i>Poecilia wingei</i>	Endler's Livebearer	5	222
Philip Newell	<i>Tanichthys albonubes</i>	White Cloud	5	15
Philip Newell	<i>Xiphophorus</i> sp. "Domestic Swordtail"		5	20
Feb 2007				
Charles Harrison	<i>Betta falx</i>		15	1542
Charles Harrison	<i>Epiplatys sexfasciatus</i> "Barol Bidu" *		15	1557
Charles Harrison	<i>Rasbora</i> sp. "Galaxy" *		25	1582
Mike Hellweg	<i>Aphyosemion hofmanni</i> *		20	2627
Mike Hellweg	<i>Paralabidochromis</i> sp. "Fire"		10	2637
Lawrence Kent	<i>Poecilia wingei</i> .	Endler's Livebearer	5	150
Mark & Tammy Langer	<i>Anomalochromis thomasi</i>		15	330
Mark & Tammy Langer	<i>Aphlocheilus lineatus</i>	Golden Wonder Killie	10	340

Member	Species	Common	Pts	Total
Mark & Tammy Langer	<i>Astatotilapia</i> sp. "Red Fin" *		15	355
Mark & Tammy Langer	<i>Cheilochromis euchilus</i> **		20	375
Mark & Tammy Langer	<i>Chlamydobogibius eremius</i>		15	390
Mark & Tammy Langer	<i>Gambusia affinis</i>		5	395
Mark & Tammy Langer	<i>Hemichromis lifalili</i>		10	405
Mark & Tammy Langer	<i>Heros severus</i>	Gold Severum	3	408
Mark & Tammy Langer	<i>Labidochromis</i> sp. "Perlmutter"		10	418
Mark & Tammy Langer	<i>Lucania goodie</i>	Blue Fin Top Minnow	10	428
Mark & Tammy Langer	<i>Micropoecilia picta</i>		10	438
Mark & Tammy Langer	<i>Neolamprologus brevis</i> "Kigoma Blue Face" *		15	453
Mark & Tammy Langer	<i>Neolamprologus brevis</i> "Sunspot" *		15	468
Mark & Tammy Langer	<i>Neolamprologus caudopunctatus</i>		10	478
Mark & Tammy Langer	<i>Neolamprologus hecqui</i>		10	488
Mark & Tammy Langer	<i>Lamprologus ocellatus</i> "Gold"		10	498
Mark & Tammy Langer	<i>Pelmatochromis nigrofasciatus</i>		15	513
Mark & Tammy Langer	<i>Poecilia reticulata</i>	Albino Powder Blue Guppy	1	514
Mark & Tammy Langer	<i>Poecilia reticulata</i>	Tequila Sunrise Guppy	1	515
Mark & Tammy Langer	<i>Pseudocrenilabrus nicholsi</i>		10	525
Mark & Tammy Langer	<i>Pseudotropheus lanisticola</i>		10	535
Mark & Tammy Langer	<i>Steatocranus casuarius</i>	Buffalo Head	15	550
Mark & Tammy Langer	<i>Thorichthys meeki</i> "Rio Chiapas" *		15	565
Mark & Tammy Langer	<i>Trichogaster trichopterus</i>	Lavender Gourami	5	570
Gary McIlvaine	<i>Hemichromis lifalili</i>		10	232
Gary McIlvaine	<i>Heterandria formosa</i>		5	237
Gary McIlvaine	<i>Pterophyllum scalare</i>	Albino Angelfish	2	239
Laura Perry	<i>Aequidens pulcher</i>	Blue Acara	5	5
Laura Perry	<i>Archocentrus spilurus</i>	Cutteri	10	15
Laura Perry	<i>Chromidotilapia guentheri</i>		10	25
Laura Perry	<i>Archocentrus octofasciatus</i>	Jack Dempsey	5	30
Laura Perry	<i>Cyrtocara moorii</i>	Blue Dolphin Cichlid	10	40
Laura Perry	<i>Hemichromis lifalili</i>		10	50
Laura Perry	<i>Neolamprologus multifasciatus</i>		10	60

* = 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)

HAP Report

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Jan/Feb 2007					
Andy Walker	Alternanthera reineckii	Red Hedge	V	15	155
Andy Walker	Potamogeton illinoensis*	Illinois Pond Weed	V	10	155
Andy Walker	Riccia fluitans	Crystalwort	V	10	155
Jerry Jost	Cabomba furcata		V	10	1080
Mike Hellweg	Cryptocoryne pygmaea*	Pygmy Crypt	V	15	2555
Charles Harrison	Cabomba caroliniana pulcherrima	Purple Cabomba	V	10	515
Charles Harrison	Vallisneria spiralis	Italian Val	V	5	515

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

* = MASI First

Member Classifieds

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

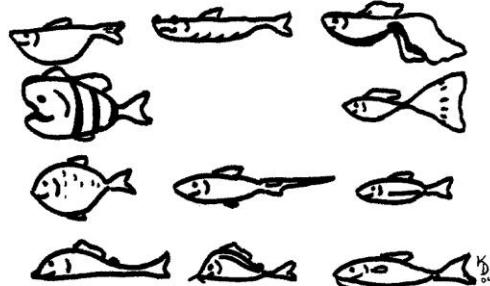
OTO Chlorine test kit, 4 ounces \$12.50 last for about 2 years, detects traces of Chlorine in tap/tank water, and other "Chemicals for the Fish hobby"

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 in, in which case it will run as requested.

 **We've got a place for you!**

Missouri Aquarium Society, Inc.

Come join us at a meeting, or contact our membership chair, Kathy Deutsch for more information
(314) 741-0474 fishfan@i1.net



Lessons Learned

By Steve Edie

Complacency is evil. I didn't lose power last summer when the huge thunderstorms knocked out power to over half a million folks in the St Louis metro area. I've got underground utilities in my neighborhood. I didn't lose power after Thanksgiving during the big ice storm. Yep. Underground utilities again. So I wasn't worried when they forecast an ice storm this last weekend. I wasn't worried when the ice storm delivered as forecast. I wasn't worried right up to the second that my power went off. Say what? This can't happen to me. And my fish. I have underground utilities. Remember?

To say I was unprepared would be an understatement. To say I responded methodically and efficiently would also be a little inaccurate. I am aware that the major issues for the fishkeeper in a power outage are temperature, aeration, and water quality (biological filtration.) In a winter power outage, heat can be supplied by a wood burning or gas fireplace, or a gas oven, provided there's a way to circulate the heat into the fishroom. Warm water can also be added into a cooling aquarium, either directly or in a zip-lock bag, refilled with warm water as needed. Aeration can be provided by dipping water from the aquarium and then slowly pouring it back into the aquarium from a foot or so high to agitate the surface. Or use a battery operated pump. Lots of 'em. All this is probably adequate in the short term, but for someone who has 1100 gallons of aquariums (me), it is virtually a full time job. By the time the last tank has gotten a little heat and air, the first tank is already past due for another turn. Unless there are multiple people to do this in shifts, the lone ranger will eventually have to sleep.

The third item is trickier to deal with. To make matters worse, Mike Hellweg sent out an Email the day before the storm reminding us of steps to take to prevent disaster. Do large water changes to reduce the amount of organic matter in the water so that the loss of filtration will not cause problems as quickly. Clean the filter media fairly well to avoid a problem that Mike experienced many years earlier. Normally a healthy biological filter contains lots of good bacteria (*nitrosoma* and *nitrobacter*) that convert fish waste into relatively harmless nitrates, which are easily removed with water changes. These bacteria are aerobic and rely on constant aeration to provide them with oxygen. However, at about the twelve hour mark in a power outage, these bacteria die off, become anaerobic and are toxic to the fish. When the power comes back on, this evil mess is pumped back into an aquarium of fish that are already weakened by reduced heat and oxygen. Mike learned this the hard way and we should learn from others' mistakes, followed by their good advice. I am not disputing any of this.

But. By the time I got home that Friday evening through heavy traffic and freezing rain, and read Mike's Email, I was just too tired to take on a bunch of water changes and filter cleanings. Besides. Refer to paragraph one. Can't happen to me. Mike was the hard-working industrious ant preparing for hard times ahead, and I was the grasshopper. And not that cool kung fu grasshopper, but the foolish, stupid, lazy one in the Aesop's fable. So when the power went out just before dawn on Saturday morning, I was screwed. Some of the people who lost power in the previous outages were out for a week or more. I was royally screwed.

After stumbling around in the dark, I looked out and saw ice everywhere, tree branches broken off, and not a light to be seen in any direction. I went through a quick mental checklist of what I had and what I might need. Flashlights? Yes, I have maybe a half dozen, but half of them are those little tiny ones for looking at hiding fish. (And I don't even keep Killies.) Batteries for all those flashlights? Well, I have some. Assorted sizes. Somewhere. A lantern? Well, no, not since Boy Scouts. Candles? Er, no. A charged cell phone? Yes. Kinda; two out of five bars. I meant to charge it last night. May have to talk fast. A transistor radio? Um, I've got a portable CD player, does that count? Okay then, no. A generator? Of course not! (See paragraph one again, in case you've forgotten.) A fireplace? Sure. Firewood? A

little. A gas oven? Yes. But. In the back of my mind, I had always assumed I could use the gas oven for heat. The top burners could be lit with a grill lighter, no problem. But the oven has a little electronic digital controller for the gas and can't be lit manually, so it is useless in a power outage. I just now learned this. Durn. Food? Plenty, mostly in the refrigerator and freezer. Okay, so I'll need a few things.

Actually the streets don't look all that bad; it seems the trees have hogged most of the ice. I don't get the car out of the garage because of the electric garage door opener, but the pickup is in the driveway. And it has a drooping tree branch literally frozen to it. Best friends. So I chipped away what ice I could, broke off several smaller branches, crawled in through the passenger door, and slowly backed up the truck, hoping I wouldn't pull the tree over, or at least the part that was in love with my truck. So I headed to the place where I was sure I would find most of the things I needed and a calm within the storm. The local Wal-Mart. Wow. If you've seen some of the "Mad Max"/"Road Warrior" movies, then you can probably picture the scene inside. Somehow, I suspect that even the British wouldn't be so civil in a Wal-Mart in an ice storm. The two old ladies put up a pretty good fight, but I got the last lantern in the place. No "D" batteries left however. I did get an electric space heater so I could warm things up quicker if the power came back on, or if I managed to find a generator. I also bought a newspaper. I don't know why. It's dark inside.

After hearing that the next suburb over hadn't lost power, (yet) I headed over to their Lowes for a slim chance at a generator, since this thing may last awhile. They were out, of course, but at the front desk, they said they had sent a truck to Columbia, Missouri to pick up some more, and were taking a list of names and phone numbers for them. The guy in front of me wanted to negotiate for a cheaper model generator, but a well placed knee sent him on his way. I said whatever they got was exactly what I wanted, so I got on the "list," but there were a lot of names already on it, so we'll see. They said they would call in three hours or so. I was already on my way back over there when they called and said they were arriving and that it was "first come, first served." "But I'm on the 'list', I'm on the 'freaking list'" I shouted to one in particular, since they had already hung up. I arrived a few minutes later, obeying some traffic laws, but not all. Okay, few. I was told they were unloading in the back corner of the store, where it looked like another "Mad Max" sequel. Those of us on the list shouted out our names, while those in the front of the line shouted that they were told first come, first served. Somehow, I emerged from the mob with a generator and shopping cart full of dirty looks. I resisted the urge to end-zone dance. I wrestled the thing into the truck and headed straight home, in case some mean people tried to take it away from me. Survival is serious business. A neighbor helped me get it into the house. After noting that it had a five-gallon gas tank, I headed back out to get gas for the thing. The first couple of stops yielded only two-gallon gas cans, but I finally found some five-gallon cans, grabbed two and filled them at a gas station that still had power. I may pull this off yet.

I hadn't taken the time to start a fire in the fireplace, since I was gone most of the day scavenging for survival stuff. The inside temperature had dropped to 59 degrees; most of the tanks were around 65. The power's been off for eleven hours; I'm running out of time. So reading the generator manual by lantern light, I cut the carton open, tilt the generator up on one end, install the wheels, tilt up the other end, install the leg bracket, and refer back to the manual. All that's left is to roll it outside, fill it with oil, fill it with gas, and fire that baby up. Then hook up the cables, run extensions into the fishroom, then clean filters and bring them back online one at a time. As I grab the handle to move it outside, the power comes back on. Ironic, but pretty cool. Even though I didn't use it, I have no regrets about buying the generator; it will provide peace of mind if the power ever goes out again. It's something I should have already had, considering how many fish I have. As I breathe a sigh of relief, I realize that the gurgling sound I'm hearing is all of the power filters starting back up. I run around the room, frantically unplugging them so as not to pump that bad stuff back into the tanks. I had neglected to unplug them earlier, because of the darkness, because I was preoccupied, or because I was stupid. Your call.

There was a feeling of euphoria that the crisis had passed with seemingly little consequence. I relax a little and look around at all of my new survival gear. I still needed to clean the filters before

plugging them back in, but the furnace was running, the tank heaters were on, and I just realized that the Colts-Baltimore game was on and still in the third quarter. So I casually settled into a routine: clean a filter or two; watch a few football plays; get a drink out of the refrigerator (the fridge has a little light inside it – that is so cool); clean a filter or two, eat dinner, etc. There was a second playoff game, the Bears and Seattle, so the routine continued with little sense of urgency for a couple of hours. Until the power went off again! If the first one was a surprise, this time was a stunner. It really didn't occur to me that it would go out again after being fixed. I had not managed to use my time well, and had only cleaned about two thirds of the filters, so a number of tanks had not gotten any relief, other than temperature. I called myself a number of names above and beyond stupid. Naughty names. Now it was too dark outside to try to fill up the generator with gas and oil. Feeling defeated, I just went to bed, hoping I had learned a lesson in time management and setting priorities.

The next morning about an hour after daylight, the power came back on. Yea; but with much less enthusiasm than before. The inside temperature had again dropped to 59 degrees; the tanks to 65. Without messing around this time, I immediately cleaned all of the remaining filters and got them up and running. I apologized to those fish that got cheated out of a couple of hours of aeration and filtration the night before. By that evening, (Sunday) all tanks had been running with clean filters for at least ten hours and all temperatures were back to normal. While some were showing some signs of stress, none had died, so I may get out unscathed yet. Not that I deserve to. So the power went out again. At least at this point, I felt I had done all I could do as far as having the fish prepared for an outage, although much later than I had intended. I had lanterns, batteries, a space heater, a generator, and at least some concept of what to do. I figured that this time, I would try to get the generator going in the dark to avoid another cycle of temperature fluctuations. After only about half an hour, and before dealing with the generator, the power came back on, so I didn't have to rush around and do anything other than be humbled by the experience and grateful that it wasn't worse. That evening, all the fish were hungry, especially the Pike Cichlids, who were splashing water to make sure I noticed them. All were fed and we all went to bed happy that night, content and comfortable.

The next morning, I awoke to a comfortable house, turned on a bunch of lights, made some coffee, toasted a bagel, turned on the TV, and generally flaunted my electrical blessings. No further outages, thank you. I now own a still virgin generator, just in case. I probably would not have gotten one without this experience. Outside of some minor discomfort, medium tree damage, and semi-major panic, I came through this just fine. No harm, no foul. But that's not the end of the story. When I went downstairs and turned on all the fishlights, I found that both of my fourteen inch Pike Cichlids were dead! I was surprised and saddened. Of all of my fish, they were the toughest and were seemingly indestructible. I think I could have slugged them with my fist and not hurt them. As I was cleaning the filters two nights before, I chose the tanks with the smaller, more delicate fish to attend to first. The Pikes didn't get their filtration until the following morning. Had I been thinking logically, I would have started with the tanks with the heaviest bio-loads, and then worked down the line from there. To make it worse, I fed them the night before. So this is my punishment for not being better prepared on several levels. Had I not spent the first day shopping, I could have cleaned all the filters with the limited daylight available. Had I focused on cleaning filters before anything else when the power did come back on, I would have finished before it went off the second time.

What can you learn from this? Believe that it can happen to anyone, even you. Keep your cell phone charged. It's too late after the power is out. If severe weather is forecast, make sure that you have all or most of the basic things on hand – lanterns, flashlights, radio, batteries, candles, firewood, food, water, blankets, etc. If it's an ice storm, the roads may be impassable, preventing you from going out to get supplies after the fact. You'll waste a lot of time trying to find these types of things if everyone else is competing for them. I ended up going to a half dozen different stores to get everything. This time will be better spent tending to your fishroom. Most important, have a plan. Think about it in advance what you will do. Realize that your gas oven may not work without power, so have a plan B. Make

preparations in your fishroom. Mike was absolutely right. Change water; clean filters. The worst that can happen is that if you don't lose power, you did an extra water change. This is not a bad thing. Keep adequate supplies of Amquel (to counteract ammonia buildup) and StressCoat (to counteract stress and slimecoat damage) on hand. You may need extra doses during this time period. Have ich medication on hand; you might need it for chilled fish. Realize that you may not have enough heat, pumps, clean filters, or time to save all of your fish. I know this may be hard, but you may be forced to save what you can and leave the rest to chance. Prioritize which fish get attention first, and which ones last, such as Anabantoids. Bio-load should factor in heavily, (pun) but also if particular fish are more delicate or sensitive than others. How valuable are certain fish relative to others; could these be replaced easier than those. I felt like I was in the position of "Sophie's Choice", where she had to choose who lived and who died. It sucks. Tough decisions, but better considered ahead of time than in the heat of the moment. Out of hundreds of fish, I only lost two, but which two was my fault. I believe I would trade almost any other two fish I own to have them back. In the big picture, I was extremely lucky. But what's done is done. I do expect to see some ich in the coming days, but I'll have enough light to read the label on the medicine bottle.

Hindsight is wonderful. Take steps now.

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From The Fishroom

by Ed Millinger

Since my last article on moving and setting up my fishroom I have added three new items. Santa Claus brought an APC battery backup (210 watts) with six power outlets. I also purchased a smoke detector and a fire extinguisher. My fish room was the only space in the house that wasn't monitored. After I set up the battery backup I decided to test it. I pulled the plug and after a short delay the backup kicked in. It however didn't fully power all of the corner and sponge filters. So I went around and elevated all those that were not working until the pressure lessened enough to operate all in a sufficient manner.

I have been a member of MASi for twenty years and I must say this last Christmas party was the best ever. Everyone involved deserves a big pat on the back.

After throwing out the highest and lowest attendance figures from the last year we averaged thirty-three members each month. Forty people attended in January so we are off to a good start in '07. It was good to see an old member Eugene Caldwell getting back into fish

In the middle of January while St. Charles County was hit with an ice storm Ste. Genevieve received quite a bit of rain. So much rain fell in fact that on Monday morning I found water had seeped into my fishroom in several locations. Apparently the ground was so saturated the water had nowhere to go. On Tuesday the room was dry but on Wednesday I discovered more water on the floor. This time however it was coming from my 200-gallon aquarium! I had bought this tank used seventeen years ago. Last may I resealed it after moving and had no problems until now. I asked a friend who is handy with fixing things if he had any suggestion and he recommended a product that DAP makes called sidewinder. It is sold as a siding and window sealant that provides wet weather washout resistance. The label states it is not for continuous underwater use. It contains xylene and ethyl benzene. A quick Internet search convinced me to never use this as a sealer inside your aquarium. It's some very nasty stuff.

I applied this all over the corner of the tank but water still leaked out. My next step was to spread it over three strips of (you guessed it) duct tape and tightly fastened it to the corner. The leaking

stopped and after four weeks it is still holding.

I recently traveled to an out of town auction. At one point the auctioneer asked for more runners. He would have been more accurate to call for standers. I thought the purpose of a runner was to run it to anyone in the audience that wants a better look once the auctioneer has announced it. It doesn't do much good to just stand there holding the item.

I'd like to thank one of our advertisers, Tropical World Pets on 8444 Watson Road for donating fish to the Ronald McDonald House aquarium. Look at the ads in the Darter and support those that support us.

I was asked to explain a little about the care of blackworms that we are selling each month. I usually keep a pound on hand in a kitty litter box in my basement refrigerator. Each evening I drain the water out and replace it with tap water I keep in a pitcher so it is the same temperature. I then refill the pitcher and place it back in the icebox. Smaller containers work well and you can even buy a blackworm keeper which has a screened bottom that you lift up and then throw away the water. You don't have to feed the worms. These are not only a great live food but the price the club is charging is very reasonable. Nobody is making money on this, it is strictly a service Mike Hellweg is offering our members. Thanks Mike.

What was Old is New Again

By Mike Hellweg

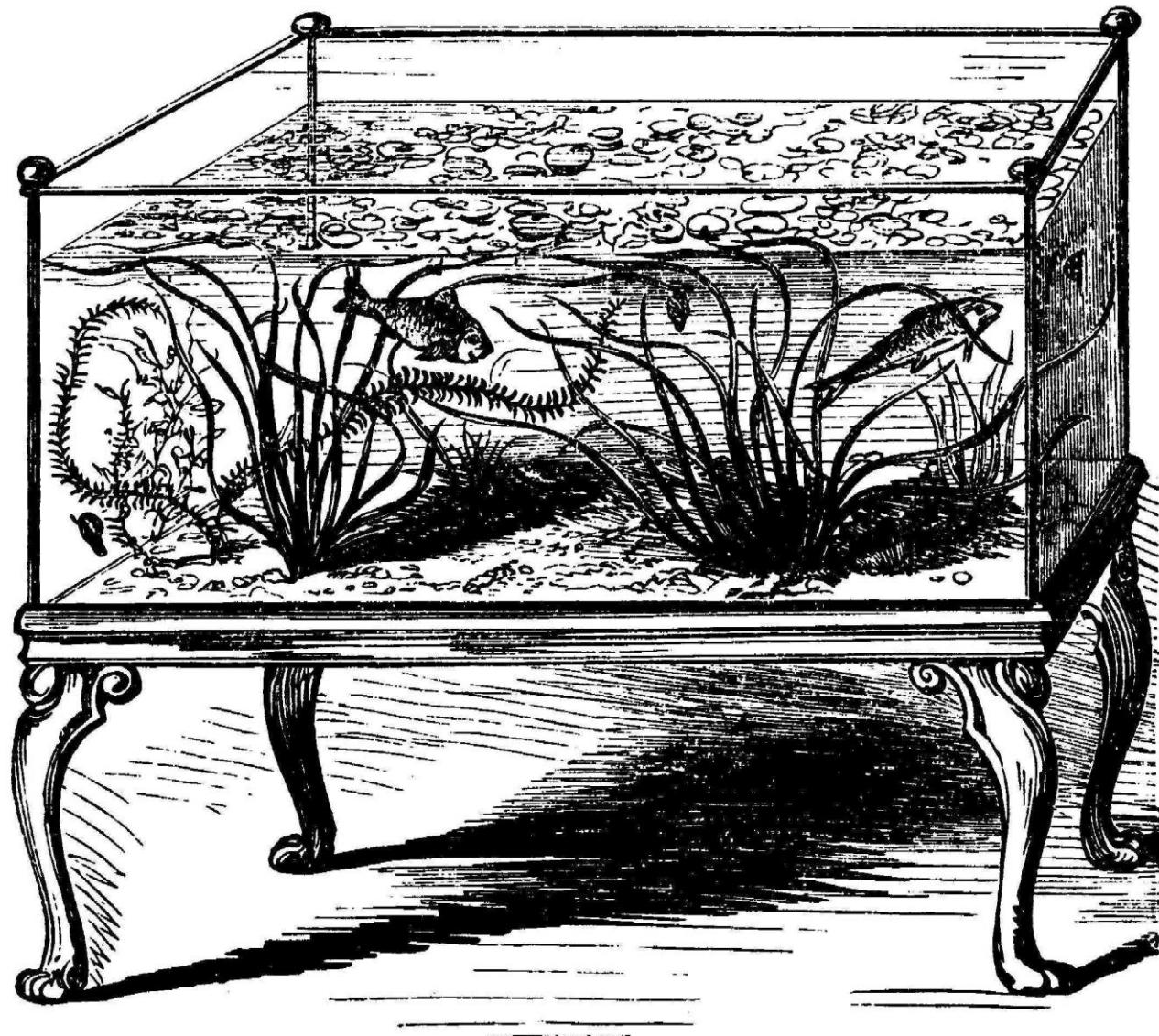
We hobbyists tend to think of everything 'new' as an improvement upon the past. But did you know that as early as 1841 scientists had already made the association between the improved health of fish when plants were kept in their aquaria and vice-versa? This association continued until the end of World War II, when it was moved from the status of necessary practice to the status of 'myth'. In the post-war period, American aquarists began to rely upon technology more and more. Planted aquaria fell out of favor in the US when hobbyists began moving their tanks away from the window and using electric light which was woefully inadequate for maintaining all but the hardiest of low light plants.

When I got my first fish in 1966, the elderly gentleman who took care of the fish at the local drugstore sold us a plant (looking back I believe it was Anacharis, but I was only a kid at the time) along with my first goldfish and 2 gallon bowl. So I've always associated plants and fish. When I grew older and met other hobbyists, I was actually surprised they thought plants did not belong in aquaria. The funny thing was that they were surprised by the fish I was successfully breeding. I attribute that success directly to keeping the fish in tanks filled with live plants.

As all of you are aware, now that modern lighting has caught up with our desire to keep challenging plants, the planted aquarium hobby has been undergoing somewhat of a Renaissance in the last decade or so. What many of you may not know, or may have forgotten, is that just as with the Renaissance period where humans began to rediscover things from the Classical period that had been lost in the Dark Ages, so too are we aquarists beginning to rediscover that which had been well known to the earliest of aquarists.

Let's take a look at one year in the early history of our hobby through the eyes of Robert A. West, a gentleman asked by the US Department of Agriculture to write a summary of the status of a relatively new pastime, aquarium keeping, for the 1864 USDA Report. The result is a 25 page report called "Fresh and Salt Water Aquaria". The reason for the short historical discourse of the next few paragraphs is to set the stage for the amazing accomplishments of the aquatic plant hobby of this time. Without this frame of reference, it is easy for the modern hobbyist to dismiss these accomplishments as

primitive or even laughable. With this frame of reference you can really see how radically different things were in everyday life and realize just how amazing the accomplishments of these early aquarists actually are. Things were not just a little different from today, they were almost alien. Nearly all that we take for granted today did not exist at this time.



River Tank, containing Gold Carp, Roach, and Minnow; *Vallisneria spiralis*, *Anacharis alsinastrum*, and Floating Frog-bit.

The year is 1864. The phrase “Victorian era” does not yet exist – as this is it! Abraham Lincoln is president, and the United States, really the only nation in the world run by a successful and up to this time peaceful popularly elected government, is still in the throes of the Civil War. Ulysses S. Grant has just taken command of the Union Army, and Union General William T. Sherman is beginning his infamous march through the South. The USA is not considered a world power, but rather merely a curious (or dangerous) political experiment. Other elected governments around the world must use the

military to enforce their laws among their own people, and often change hands without a vote. The Empire of Japan is a feudal society that is closed to the outside world except to US traders by treaty. The island kingdom of Hawaii is independent. Alaska is a Russian province. Though the coastal regions of parts of South America are settled, the interior is largely unexplored. Africa south of the Sahara is almost completely unexplored. Stanley uttered his famous quote “Dr. Livingston, I presume” only a little over two decades ago. Most nations we know today either don’t exist, or are ruled by monarchs of one sort or another. Many modern non-European nations are colonies of one or another European power. London is the center of science and the heart of a vast empire that spans the globe, and Queen Victoria is arguably the most powerful leader on the planet.

A young Thomas Edison is still more than a decade away from beginning his work to perfect the electric light. In the night-time, homes are lighted with candles, coal oil lanterns or, if one lives in a major city and is on the cutting edge of technology, with gas lights. The electric grid we take for granted won’t be started in earnest for two more generations. Computers and the Internet are not even part of the wildest dreams of popular writer Jules Verne’s vision, and are more than 130 years away. Mark Twain is five years from publishing his first novel.

A trip across the North American continent, if one is lucky, takes many weeks or even months, and is fraught with danger. Many who start the journey never reach the other end. The Indian Wars we all remember from the cheesy Hollywood Westerns of the 1950’s and 1960’s are yet to be fought, and the Plains Indian Nations are still a major power on the North American continent. Buffalo roam the Great Plains from horizon to horizon, dwarfing anything we could imagine today. Steamships are relatively new, and the most reliable way to travel by sea is still by sail on a wooden ship. The first “iron clad” wooden ships are just now being used in the war. The completion of the transcontinental railway is more than a decade away.

Orville and Wilbur Wright have not been born yet so powered flight is a long way away. Primitive automobiles are decades away, and radio won’t be around until children born this year are grandparents. Those who are infants today will live to see a television if they are lucky enough to survive into their 90’s (and few will). Outside of major cities, most roads are dirt and become impassable during bad weather. The US has an agricultural economy and most Americans live on farms, and never travel more than a few miles from their birthplace. Most alive at this time will never see indoor plumbing or a home lit with electric light, much less a motorized tractor to replace their plow team. There is no such thing as going to the grocery store to buy prepared foods. All foods are prepared in the home, from scratch. In the cities you might be able to find a baker and buy a loaf of bread, but in the rural areas, if you want bread, you have to buy (or even grow!) the ingredients and make it yourself.

For the most part, women do not work outside of the home, with the exception of school teachers, nurses, and nuns (and a large percentage of the nurses ARE nuns). Advanced schooling is something for the rich. Most people alive this year have not completed grade school.

Life expectancy is a mere 50 years, and nearly half of the children born in the US don’t see their fifth birthday. A compound fracture is treated by amputation. Surgery is still often performed without anesthesia, and more than 40% of those who survive the operation die of infection afterwards. Doctors have only learned a few years ago that washing their hands before examining a patient helps to stem the spread of infection! And many of them still do not believe this. A surgeon’s tool kit is almost the same as a carpenter’s, and is often just as clean. Many surgeons count their expertise based on the amount of accumulated dried blood and pus built up on their surgical gowns. Effective antibiotics are still generations away. A minor infected cut can lead to amputation, gangrene, or death. Even a simple thing like an ear infection can kill you. Smallpox is a real danger, and almost every year a cholera epidemic in one or another US city kills tens of thousands. You can’t even pop an aspirin for a headache – it doesn’t yet exist.

My point is that this is NOT even close to the world of today. And yet an aquatic plant hobbyist might find something familiar in the curious glass boxes that are starting to become popular among certain of the middle class with some free time on their hands. In his article, Mr. West goes into great detail about how an ‘aquarianist’ may set up a tank. He notes in the first sentence that “The fact that ‘plants immersed in water, when exposed to the action of the light, emit an air [gas] called oxygen,’ was announced by Ingenhaus in 1778, but it was not until near the middle of the present century [the 19th century] that this principle was applied to the aquarium.” Interestingly, he discusses both planted freshwater and saltwater aquaria in his article. He notes that the hobby has become so popular that even the most popular cartoon of the time, “Punch”, has lampooned it on several occasions. One can always tell they’ve ‘arrived’ when they become fodder for the comics of the day! And he notes that a ‘new class of dealers – marine stores’ dealing specifically in marine aquaria and their related ephemera, are well established. He also notes that in America there are now many dealers that deal specifically in freshwater tanks and their inhabitants.

In his description of setting up a planted tank, we would recognize many of the steps. Of course, many hobbyists of the day economize (we aquarists are still notoriously cheap today!) and make their own tanks. He recommends his favorite aquarium cement. The optimal design for a tank is discussed, with notation that one that is low, long and wide is better than one that is tall, short and narrow. His optimal dimensions for a tank approximate something between a modern 20 long and a 30 breeder, holding approximately 25 gallons. The next thing discussed is the optimal tank location. This is for the all-important source of light. Apparently there is a debate (when have we hobbyists ever *NOT* debated the best way to do things?) over whether placement in a northern or an eastern window is preferable. Note that he refers to it as a ‘tank’ here. According to Mr. West, it does not become an ‘aquarium’ until filled with water, fish, and plants.

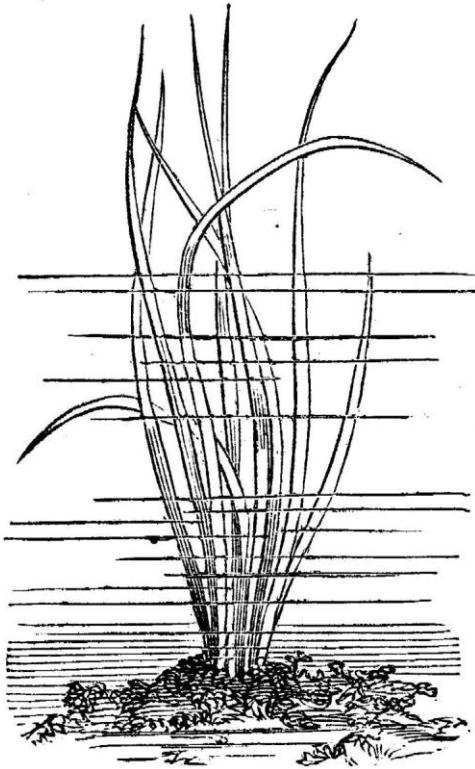
Next he recommends a substrate of earth, fine gravel, or small pebbles, noting that most plants, except for ‘lilies and those that grow partially submerged’ do not need earth as they will take most of their nutrients from the water column. There is even a debate that most of us would recognize as to the décor or style of the tank that the aquarianist (the term for aquarists of the day) will follow, describing one that is like a ‘primeval wood’ and another akin to ‘artistically arranged shrubbery’. Sound familiar? Next he describes the proper types of stones and rockwork to add – even describing trying to find those in streams with moss attached. Driftwood is not mentioned.

He describes using the contrasts between plants with ‘a considerable degree of transparency and [that] are exquisitely delicate when the light streams through them from behind’ with those that are ‘more nearly opaque and of the darkest green’, giving the aquarianist a couple of specific examples to illustrate his point. The modern hobbyist would recognize the artistry that is reflected throughout the considerations for layout of the tank. I’ve seen hobbyists hotly debate which of these styles, even today, is most appropriate.

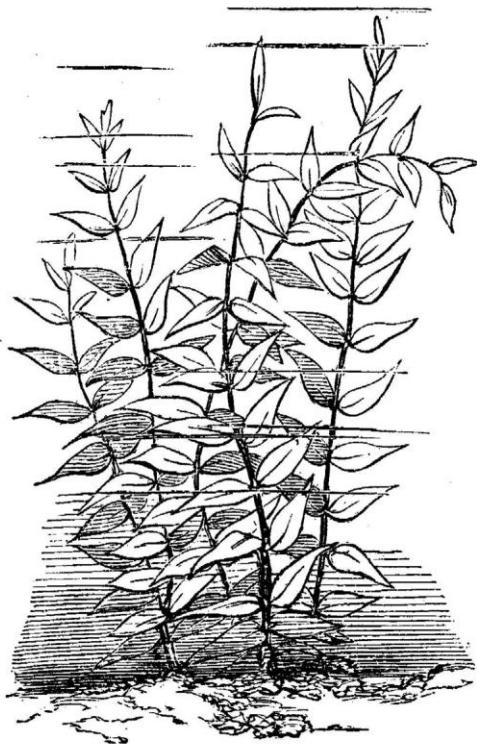
Finally, he comes to the plants. He makes reference to a book by a Mr. Humphreys called *River Gardens; or Home Culture of Freshwater Plants*. I have yet to locate a copy of this book, so I can’t comment on it further, though it might make for interesting reading. Mr. West describes aquascaping the tank using a centerpiece plant in larger aquaria, but avoiding the same in smaller ones. He then goes into a description of some of the various plants available, their care and their hardiness for the aquarium, including describing their blooms, which are apparently considered normal in the aquaria of the day.

We would recognize all of these plants, though some are now considered more appropriate for the water garden than the aquarium. He describes plants such as the tapegrass *Vallisneria spiralis*; *Lobelia cardinalis* (Cardinal Flower); *Acorus sp.* (Sweet Flag); the water plantain *Alisma plantago*; the arrowhead *Sagittaria sagittifolia*; several pondweeds of the genus *Potamogeton* including *P. densus*, *P. natans*, and *P. crispus*; *Limnobium spongia* (Frogbit); *Myriophyllum* (Foxtail); *Anacharis* (*Egeria sp.*); *Callitricha* (Water Starwort); *Hydrocharis morsus-ranae* (also confusingly called Frogbit to this day); *Hippuris vulgaris* (Mare’s Tail); *Stratiotes aloides* (Water Soldier); the stoneworts *Nitella flexilis* and *N.*

translucens; Duckweed *Lemna trisulca*; the water lily *Brasenia peltata*; the water calla *Calla ethiopia*; and in large tanks, *Nymphaea* species.



Valisneria spiralis—(Tape Grass.)



Potamogeton densus—(Pond-weed.)

Mr. West notes that “an aquarium is said to be working well when the water is clear, has a bright, sparkling, living appearance, and infinitesimal globules of air (which are oxygen) are seen to ascend from the plants under the action of light”. That floored me. He’s describing what we now refer to as pearl! And it is noted as being the normal state of affairs for a healthy tank in these ‘primitive’ tanks long before even the invention of electric light.

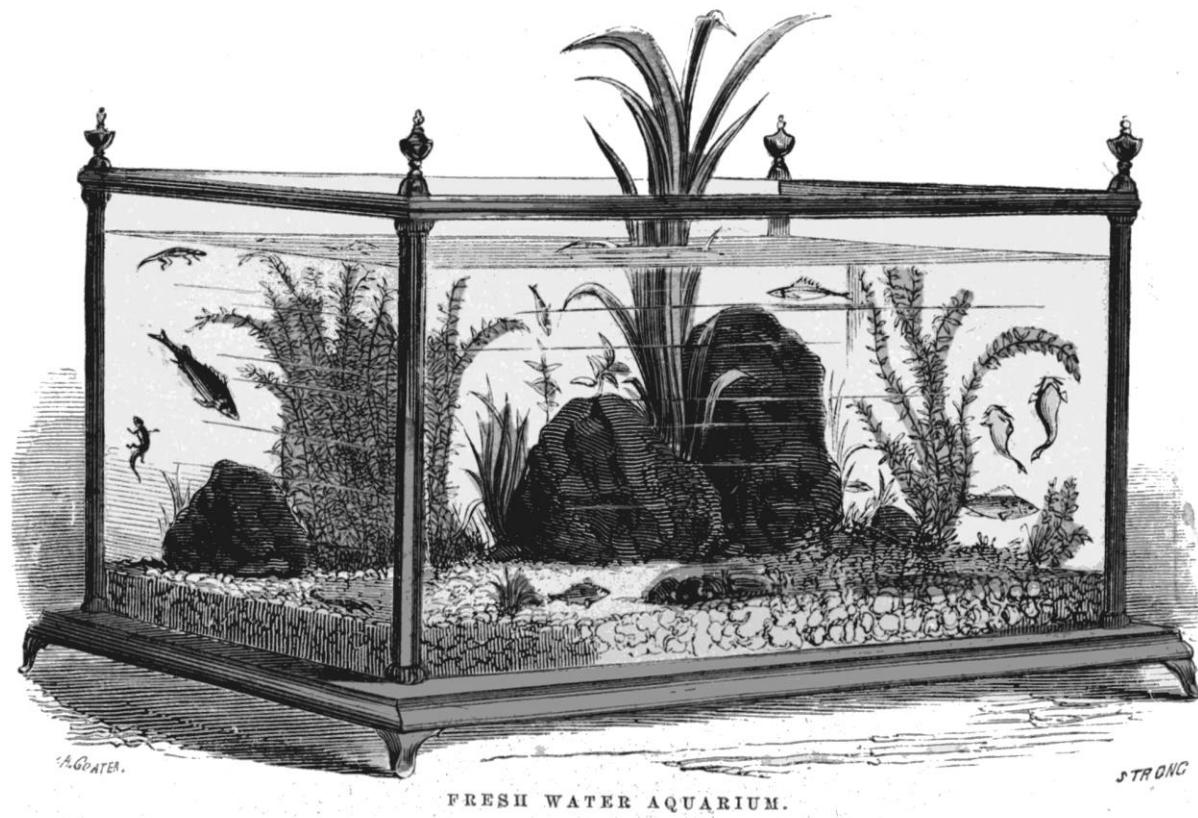
In the way of tank maintenance, he describes using a length of ‘India-rubber tubing’ to siphon off bad water, a sponge on a stick to wipe the algae from the front glass (algae growth on the sides and back is seen as beneficial), a glass dip tube, a small net, and a pair of “wooden forceps” “which anyone can make for himself out of a piece of hickory wood” – I bet no one today even thought of that while in their quest for the finest surgical steel super long ‘plant tongs’! He also mentions a syringe of glass and rubber, though he personally doesn’t use one. And finally, he discusses the use of an automatic ‘aerometer’ to aerate the tank, though he notes that after long personal use that aeration is ‘unfavorable to the growth of plants’. And we thought we had just ‘discovered’ this a few years ago.

As for inhabitants of the tank, apparently the plants take center stage. Mr. West does list several snails that are beneficial, as well as those to avoid. He also lists helpful shrimps that help eat algae and detritus (and we thought that was a new idea!), and even aquatic insects! Finally he comes to the fishes and the ‘reptiles’ (newts). Most of the fish he describes are small minnows, dace, and sunfishes. He recommends against eels, as they will eat the invertebrates and smaller fishes, and disturb the plants. There is even an excellent description of the spawning of sticklebacks in his home aquarium!

He also goes into great detail about salt water aquaria, the keeping of anemones and other invertebrates, and even of keeping marine plants, but that is beyond the scope of this article! As you can

see by this short trip into our past, many of the things that we now think are ‘hot’ and ‘new’ are neither – but rather are a rediscovery of what we’ve forgotten over the decades of the 20th century as we strived to move to a more modern way of aquarium keeping. The next time you hear about something ‘new and different’, consider that it might not be so, but rather merely ‘new again’.

I will wrap this trip into yesteryear up as Mr. West did, with an excerpt from the words of Sidney Hibbard: “The aquarium introduces us to new scenes hitherto hidden from our view, makes us acquainted with the economy of creatures of whose very existence many of us, not altogether unlearned in the history of the world, were previously ignorant. Their habits of feeding, of moving, and burrowing; their battles, their changes of form, the display of even a strange intelligence, working its way by wonderful means to wonderful ends, impress the observer with an idea of the boundlessness, the variety, the adaptations and resources of a world brimming with life, in all manner of strange forms and developments...happy we to get some glimpses of His method of working through the medium of the strange creatures which leave the mysterious deep to throw a new radiance in our homes.”



Thanks to Lee Finley for providing the pictures and the original source material.

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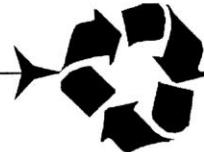
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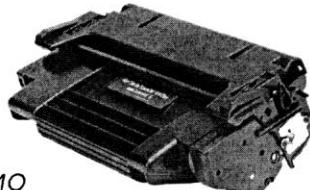
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