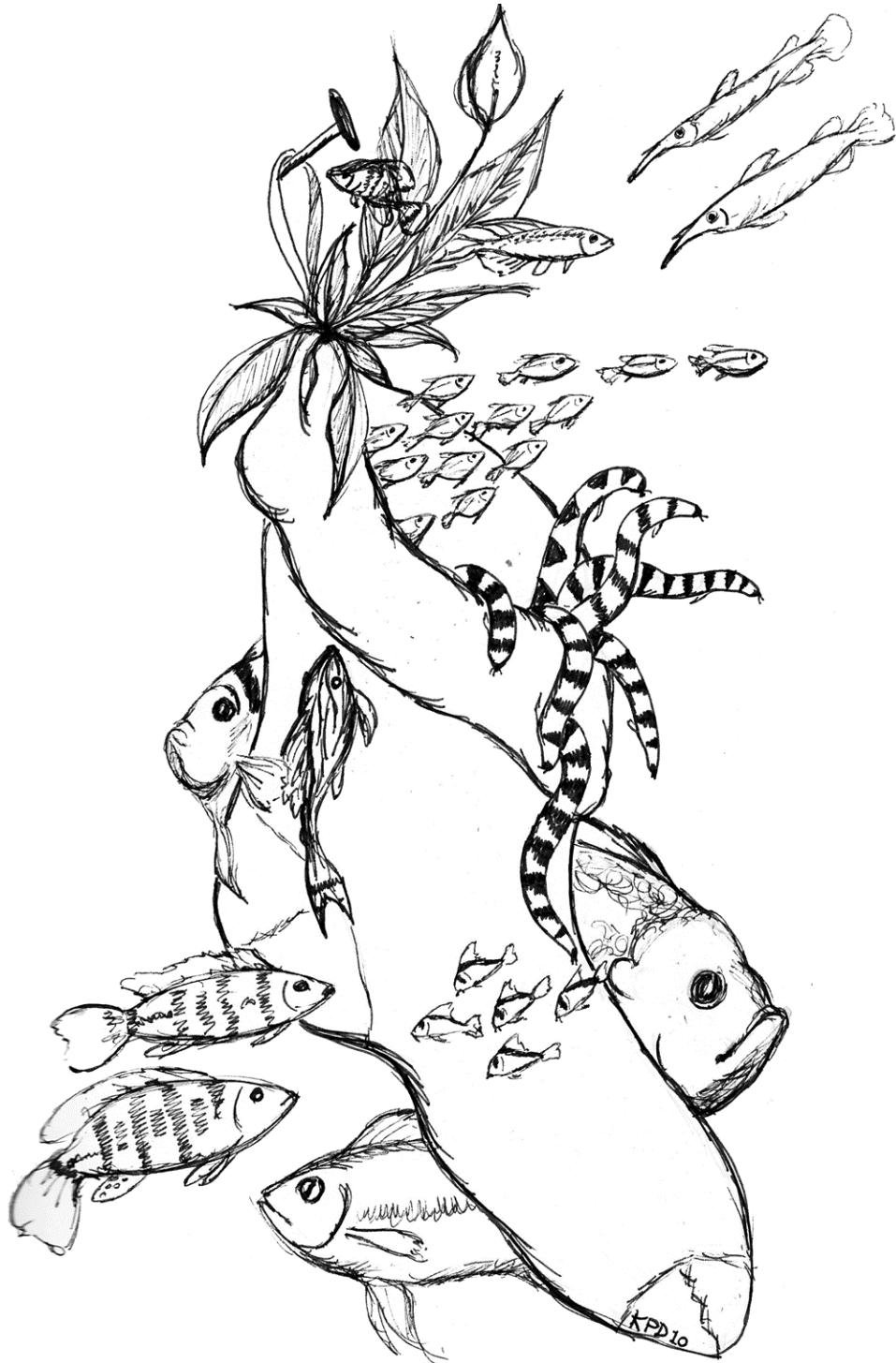


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November - December 2012
Missouri Aquarium Society, Inc.

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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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Opinions expressed by the contributors are their own and do not necessarily reflect the opinions of the Missouri Aquarium Society, Incorporated.

This Darter has been printer with remanufactured toner cartridges from InkForYourPrinter.com

Places to Be / Things to See

SUNDAY November 11, 2012
Auction, 11:00 AM @ Gardenville Masonic Hall

THURSDAY November 15, 2012
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

SATURDAY December 1, 2012
Executive Council
Hosted by Charles Herrison

THURSDAY December 20, 2012
General Meeting, 7:30 PM @ Dorsett Village Baptist Church
MASI Christmas Party

THURSDAY January 17, 2012
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

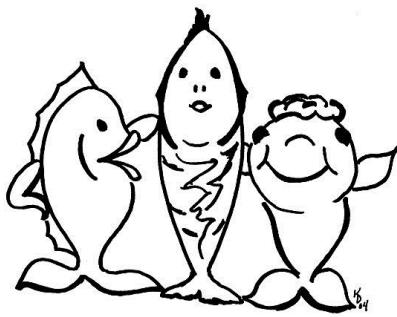
SATURDAY January 26, 2012
Executive Council
Hosted by Nick Scarlatis

SUNDAY February 16, 2013
Auction, 11:00 AM @ Gardenville Masonic Hall

THURSDAY February 21, 2013
General Meeting, 7:30 PM @ Dorsett Village Baptist Church

April 12-14 2013
Spring-Fling Fishy Thing Show, Banquet, and Auction

Membership



Yearly membership in the Missouri Aquarium Society, Inc. is \$20 per calendar year for members receiving a paper copy of the Darter. Starting in 2013, it will only be \$15 for members electing to receive the Darter electronically. 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.

From The President's Tank

Pat Tosie

Things are taking shape for an exciting year. Derek did a wonderful job with the Swap Meet, it was a huge success! Kathy did an awesome job putting the Super Bowl together on short notice and turnout was good. Scott is working on the plans for the 2013 Annual Show and Workshop and I'm sure he will orchestrate a fantastic weekend for us this Spring, so be sure and start working on what you are going to show.

The BAP program is going great, the HAP program is running smoothly, and Rose has the Monthly Bowl Show going well. Mike has our Auctions moving well and we will have a few changes for 2013. Steve is continuing to do his super job as editor but would like to see someone take over in the future, so if that is something of interest, you may want to talk to him about helping out so you can learn what it takes to put out one of the best club publications in the country! Charles is keeping our website up to date and looking good.

The Aquatic Gardeners Association (AGA) is fast approaching and will be over with by the time you read this, and Mike (the perfectionist he is) has everything well in control and it looks to be one of the best the conventions the AGA has ever had.

One change in the Council has happened, Damon Cartmell has resigned due to work and family obligations and John Stollhans has readily agreed to fill his shoes on the council. Thank you Damon for serving and to John for finishing Damon's term.

The council has decided that our next MASI Challenge will be Adopt-A-Coral. You can see info at <http://www.adoptacoral.org/coralrn/catalog/index.php> The MASI Challenge is where we support a worthy cause and donate to them. Members can bring fish, plants and supplies to the monthly meetings and our Auctions and designate the money toward our yearly challenge. We call it the MASI challenge to challenge other clubs from around the country to try and beat our donation. Several years we have well surpassed \$1,000.00. This is one of the charity items that we all can be proud of. Support the MASI Challenge and bring something to each meeting!

At our monthly meetings, I have been attempting to have the program close to the start of the meeting, reports and auctions next and end a little early so that we can have time to socialize with one another. Please feel free to give me, or any of the council members, suggestions that you may have for programs, running the meetings, or anything that you think may help our club. And as always, invite a friend to the meeting.

Keep looking below water....

Auction Chairman's Message

Mike Hellweg

The Annual MASI Fall auction is coming up fast. It is on November 11th and it starts at 11:00 am. Some of you may not be reading this until afterwards, so I hope you had a good time and helped make our 2012 Fall Auction another one for the history books. The fall auction will be our last one at the Masonic Lodge. We have outgrown the space. Our new location will also be a lot less work on our members as the event staff at the hotel will do most of the setup for us.

The auction dates for 2013 are:

February 10, 2013

April 14, 2013

August 11, 2013

November 10, 2013

All start times will be at 11:00 AM. These four dates will be at the Crowne Plaza St. Louis Airport, the same hotel which hosted the AKA Convention last spring, the Gateway Guppy event this past October, and the AGA Convention a few weeks ago.

Thanks to our many volunteers who helped make the auction run as smoothly as possible. I hope you all enjoyed it!

And for now, 'nuff said
Mike
auction@missouriaquariumsociety.com

The 2013 MASI Spring-Fling Fishy Thing!

By Scott Bush

I am pleased to announce MASI will once again be having a show in conjunction with our yearly banquet and spring auction. This will be held the weekend of April 12-14, 2013. We are also pleased to announce a new location, the Crowne Plaza Hotel at the airport, St. Louis. This is a great facility with plenty of room, a central location and a fantastic banquet set up. There will also be rooms available for anyone wishing to come in from out of town. As for the rest of the weekend, we are working on an awesome line up of speakers and vendors. We will also be having a small show with a limited number of classes so start growing those fishes now!

As the show chairman I am responsible for putting this all together but it is YOUR show MASI, so tell me what you want and we will work on making it happen. There will be plenty of opportunity for everyone to get involved so if you want to be in on the planning or just help to make sure the weekend runs smoothly, please let me know. I look forward to working with many of you to make this a weekend to remember!

Scott Bush
sportspicks@charter.net

From The Fish Room

By Ed Millinger

This past September someone from Jefferson City, Mo. listed seven (five year old) unrelated L 46 Zebra plecos on Aquabid, The auction also included driftwood, an RO unit, heaters, a 40 gallon breeder, and more. There was no shipping offered; you had to live within 200 miles, roughly either Kansas City or St. Louis as boundaries that the seller would drive to. Even with that restriction the final winning bid was \$2500.

I thought the swap meet was a great time. I saw some new faces and some old also. Unlike the auctions the sellers were able to interact more with the attendees. Derek Walker did a great job putting this together.

From the MASi way back machine we travel to the March-April 1991 Darter. Included in this issue was a great article from Dennis Hetzel about his first encounter with MASi. He and his wife attended a MASi auction but arrived one and a half hours late. He didn't know what to expect but was blown away by the number of people attending and the amount of fish that were there. He went from worrying about there being nothing but "common fish like neons or guppies" to wondering if he had brought enough money to buy all the great items that he saw.

Dennis joined that day and attended his first meeting later that week.

Also in this issue there was a interesting and funny introduction to one of the upcoming show speakers Ginny Eckstein written by "annoymouse". There were ads by "that pet place" on Lemay Ferry, SEA WORLD in DeSoto, and a listing of the MASi library books by Gary Ketts MASi librarian and Mike Hellweg assistant librarian.

The October meeting Super Bowl was great. There were thirty three entries from ten different entrants. Dave Rush and others set up, Kathy Deutsch and Rose Sonderman worked out the labeling of bowls and coordinating the judging done by Mike Hellweg, Larry Allbright, and myself along with Cory Koch and Scott Bush who were observing. Congratulations to Jared Wehmeyer who took home the Judges award and people's choice award with a great looking goldfish. This was the first time he has ever shown a fish. Which just goes to show you that you can't win if you don't show. This also reminds me of a goldfish that showed very well in a Tri County Tropical Fish Society show one year. Every time anyone at all walked by the goldfish came to the front of the tank and showed its personality and moved back and forth almost begging to be noticed. It turns out after the show we found out that the fish was kept in a dental office with a can of food next to it. By showing off people couldn't help but reach in and put some food in the tank.

Thanks for reading and have a fintastic day.



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.

2012 Superbowl Results and Statistics

By Kathy Deutsch

Entrants 10 Entries 33

Judge's Choice Jared Wehmeyer Goldfish
People's Choice Jared Wehmeyer Goldfish

Class 1 Old World Cichlids

Class 6 Livebearer Normal Finnage

Class 2 New World Cichlids

Class 7 Egglayers

1st Jared Wehmeyer Goldfish
2nd Andy Walker Strawberry Rasbora
3rd Kathy Daly Buenos Aires Tetra

Class 3 Rainbowfish

Class 8 Eggayers

1st Dwayne Peters Flame Gourami
2nd Pat Tosie Betta burdigala
3rd Dwayne Peters Fancy Betta

Class 4 Killifish

1st Jack Heller	<i>F. gardneri</i>
2nd Jack Heller	<i>E. olbrechtsi</i>
3rd Pat Tosie	<i>P. sakarnyi</i>

Class 9 Catfish

1st Larry Allbright C. aeneus albino
Class 10 Catfish

Class 5 Livebearer Facy Finnage

Editor's Notes

Steve Deutsch

This issue brings another year of the Darter to a close. Once again thanks to all who make this possible – the authors, Charles for printing, Pat for mailing, and everyone who collates at the meetings. This only happens because of you.

This finishes my ninth year as the editor of the Darter. I am retiring at the end of my tenth year, unless someone wants to take over sooner. See me for more information on what I do, or Pat to volunteer to take over. If someone wants to volunteer now there is a year to learn if you want.

Article deadlines for next year's issues are December 15th, February 15th, April 15th, June 15th, August 15th, and October 15th. All authors and articles are welcome.

BAP Report

Steve Edie

Member	Species	Common	Pts	Total
<u>Sept 2012</u>				
Mike Hellweg	<i>Ilyodon furcidens xantusi</i> "Rio Colima" *	Yellow Tail Goodeid	20	5079
Mike Hellweg	<i>Skiffia francesae</i> "Rio Teuchitlan, Jalisco" @		40	5119
Jerry Jost	<i>Badis singenensis</i> "Buxar" *		20	1695
Jerry Jost	<i>Corydoras sterbai</i>		10	1705
Cory Koch	<i>Astatotilapia aeneocolor</i> #@	Yellow Belly Albert	10	2437
Cory Koch	<i>Konia eisentrauti</i> "Lake Barombi Mbo" **@		40	2477
Cory Koch	<i>Xystichromis phytophagus</i> #@	Christmas Fulu	10	2487
Jim Miller	<i>Ataeniobus toweri</i> @		30	2874
Jim Miller	<i>Pundamilia nyererei</i> @		20	2894
Jim Miller	<i>Archocentrus multispinosa</i>		5	2899
Dwayne Peters	<i>Poecilia reticulatus</i>	Black Guppy	5	63
Nick Scarlatis	<i>Aulonocranus dewindti</i>		15	250
Nick Scarlatis	<i>Cryptoheros septemfasciatus</i> @		20	270
Nick Scarlatis	<i>Cyprichromis leptosoma</i> "Utinta"		15	285
Nick Scarlatis	<i>Pundamilia nyererei</i> "Makobe Island" @		20	305
John Stollhans	<i>Ilyodon furcidens</i>	Goldbreast Goodeid	15	205
John Stollhans	<i>Moenkhausia pittieri</i>	Diamond Tetra	15	220
John Stollhans	<i>Neolamprologus olivaceous</i>		10	230
Debbie Sultan & Tom Corradini	<i>Geophagus steindachneri</i>	Red Hump Geophagus	10	25
Pat Tosie	<i>Amphilophus flaveolus</i> *		20	4070
Derek Walker	<i>Ancistrus</i> sp. "Calico"	Calico Bristlenose	10	2815
Derek Walker	<i>Badis</i> sp. "Buxar"	Buxar Badis	15	2830
Derek Walker	<i>Phallichthys quadripunctatus</i> "Punta Pena, Panama" @		10	2840
Derek Walker	<i>Ptychochromis oligacanthus</i> @	Malagasy Juba Cichlid	30	2870
Ron Warhurst	<i>Poecilia wingei</i>	Endler's Livebearer	5	5

Ron Warhurst	<i>Xiphophorus</i> sp. "Domestic Swordtail" Wag Swordtail	5	10
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Oct 2012

Mike Hellweg	<i>Neolamprologus olivaceous</i>	10	5129	
Mike Hellweg	<i>Girardinus uninotatus</i> "Rio Taco Taco" *	10	5139	
Jerry Jost	<i>Corydoras caudimaculatus</i> *	Tail Spot Cory	15	1720
Jerry Jost	<i>Sewellia lineolata</i>	Reticulated Hillstream Loach	20	1740
Cory Koch	<i>Ameca splendens</i> @		30	2517
Cory Koch	<i>Cunningtonia longiventralis</i> **		25	2542
Cory Koch	<i>Cryptoheros nanoluteus</i> #@		10	2552
Bruce Mayhew	<i>Hemichromis letourneuxi</i>		10	285
Jim Miller	<i>Pethia erythromycter</i> **	Lipstick Barb	25	2924
Nick Scarlatis	<i>Geophagus steindachneri</i> "Nieva"		10	315
Nick Scarlatis	<i>Sympodus aequifasciatus</i>	Pigeon Blood Discus	20	335
Pat Tosie	<i>Cryptoheros chetumalensis</i> *		15	4085
Pat Tosie	<i>Tomocichla sieboldi</i> "Rio Garache" **		25	4110

* = 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>

Note: Bad news and good news.

Bad news is that more species have been added to the C.A.R.E.S. list.

Good news is there are more opportunities for bonus points if you can find and breed these species.

Electronic Distribution Now Available

For those who prefer, the Darter is now available electronically, instead of the paper distribution. To change from paper to electronic distribution, email me at editor@missouriaquariumsociety.com. You will get your Darter sooner and the club will save printing and postage. And, starting in 2013, you will save \$5 on your membership.

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.



Spanish Style Grilled Fish

Ingredients:

1 - 3-to-6-pound whole fish (such as striped, rockfish, or sea bass), cleaned and scaled	2 1/2 - tablespoons sweet Spanish paprika
1 - head garlic, cloves separated and peeled	4 - large red onions, thinly sliced
2 - teaspoons cayenne pepper	3/4 - cup extra-virgin olive oil
1/2 - cup red wine vinegar	1 - bunch scallions, chopped
1 - lemon, thinly sliced	2 to 3 - sprigs rosemary
	2 to 3 - sprigs thyme
	Kosher salt
	Vegetable oil, for brushing

Makes 4-6 servings.

Directions:

Preheat a grill to medium high. Combine 1 sliced onion, 1/2 cup olive oil, the vinegar, garlic, lemon slices, scallions, 1 1/2 tablespoons paprika, the cayenne, rosemary, thyme and 2 teaspoons salt in a large bowl. Set aside at room temperature, 1 hour.

Spread the remaining 3 sliced onions in a large disposable roasting pan. Drizzle with 2 tablespoons olive oil and sprinkle with 1/2 tablespoon paprika and 1 teaspoon salt.

Combine the remaining 2 tablespoons olive oil and 1/2 tablespoon paprika in a small bowl. Rinse the fish and pat dry. Rub all over with the olive oil-paprika mixture. Stuff the cavity super full with the marinated onion-herb mixture, adding anything that doesn't fit to the disposable pan.

Brush the grill grates generously with vegetable oil. Sprinkle the fish on one side with 1/2 teaspoon salt; place salt-side down on the grill and cook until charred on the bottom, 4 to 5 minutes. Sprinkle with 1/2 teaspoon salt; gently flip and cook until the other side is charred, 4 to 5 more minutes.

Transfer the fish to a baking sheet and let rest, uncovered, 10 minutes. Meanwhile, transfer the disposable pan with the onions to the grill. Cover and cook, stirring occasionally, until the onions begin to soften, 8 to 10 minutes.

Remove the pan with the onions and reduce the grill heat to medium (if using a charcoal grill, break up the coals to reduce the heat). Add the fish to the pan, belly-side down, making sure you don't spill the stuffing (use your hands to hold him together). Once he is settled, push more onions around him to prop him up. Add 3/4 cup water to the pan; place on the grill, cover and cook until the flesh is opaque, firm and slightly flaky, 20 to 25 minutes.

To serve, use a large spoon to pull the flesh from the bones-it will fall off easily. Serve with the grilled onion mixture. Make sure you save the fish cheeks for your favorite friend at the table-they're sweet and tender.

Club Hopping 2012

Steve Edie

Note: Some of this year's dates are tentative.

Nov 11 - St Louis: Missouri Aquarium Society – Auction

Nov 11 – Milwaukee: Milwaukee Aquarium Society – Fish-O-Ramma Swap Meet

Nov 11 – Chicago: Greater Chicago Cichlid Association Swap Meet

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

Apr 5-7, 2013 – Hartford: NorthEast Council Convention

May 24-26, 2013 – Chicago: GCCA Cichlid Classic

July 18-21, 2013 – Denver: American Cichlid Association Convention

Check with the individual clubs for more details.

Size Doesn't Matter..... and Other Myths

by Ed Koerner

Reprinted from the June 2012 Fins & Tales of the Kitchener Waterloo Aquarium Society

Well, when you are a shrimp you would think that size doesn't matter, but as is the rule in life – That is relative. Unless it isn't. (For those of you that enjoy logic problems or have taken an introduction to logic course, take some time and consider the old phrase "Everything is relative..." as being a true statement and see where you end up). Okay, all that mind numbing theory aside, we usually think of shrimp as small little insignificant creatures but they have become rather large in the hobby the past few years - in attention, interest and sometimes prices. I have seen people asking \$300 for a single King Kong shrimp that grows to little more than an inch long.

I have been keeping and trying to spawn and breed different shrimp species the past few years with various degrees of success and decided it was time to come out with an article that could introduce more of these little guys to more people who may not have tired them yet, or maybe don't know enough about them to try. I will share some of my experiences and describe some of the different classes and varieties of shrimp and maybe when it's all over and done you might consider trying some yourself – or not.

First, let's look at some common thoughts on shrimp and bust up some myths. Shrimp are fragile and hard to keep alive. This is a myth depending on the type of shrimp you wish to keep. I will say that some are harder to keep than others, but if you do your research and take proper care of your shrimp, they are relatively easy for the most part. I have kept cherry shrimp in nothing more than an old margarine container for a couple of weeks while waiting for someone to come over and pick them up and they were fine. I gave them a few water changes and food but they did just fine and went on to produce hundreds of little shrimp for their new owner. Shrimp are too small to be interesting in a tank. I would say this is a myth for several reasons. Shrimp can be wonderful to watch as they go around a tank and pick an area clean of food or just swimming around looking for a quick date (males can go crazy in a tank when they sense a "saddled" female nearby). They can also grow to some size. Bamboo shrimp from Thailand can grow to a foot long and North American Macrobrachium carcinus can reach 10 inches. You can't keep different shrimp together because they will cross breed. This too is a myth, although you have to pick and choose what species you keep together. Some shrimp will hybridize if they are from the same family, while other shrimp that may look the same can be kept with them without any issues and will breed true. I will talk more about this later.

There are three basic families of shrimp that are found in the hobby with a scattering of a few others that I will say make a fourth group. Shrimp are being discovered and renamed quite frequently which can make it a little confusing at times. Some species are also difficult to find information on and it can become a bit hit and miss when keeping them and trying to breed them. Some are completely fresh water varieties while others need a brackish stage in their life to mature. Some shrimp hatch out as complete fry in a miniature version of their parents while others have a larval stage that needs to grow and develop before taking on their adult body structure. Most shrimp are basic scavengers, but some are more specialized in their dietary needs and feeding methods. There are algae eating shrimp and there are some that are filter feeders with fan like appendages rather than claws, while some shrimp can be predatory. Shrimp should have a high protein diet and there are several foods on the market that are available that have been developed especially for shrimp recently. I have tried a few of these along with shrimp pellets, algae wafers, assorted flake foods and homemade "Critter Crumbs" with very good success.

There are a few terms that will be used when breeding shrimp that are handy to understand. Shrimp are either male or female. Females are generally larger and more colourful and are normally easier to distinguish. When they are ready to breed, they will be "saddled", which is the condition of being ripe with fertile eggs. These are found on the back behind the head and gives the appearance of the shape of a saddle. The female also gives off a pheromone at this time which the male picks up and drives him crazy. You may see some shrimp swimming quite vigorously throughout the tank. These will be males sensing and searching for a ripe female. Saddling will normally occur after a "molt". This is the process of a shrimp shedding its exoskeleton to grow into a new outer shell. The shell does not grow with the shrimp and when there is enough growth the old shell is shed and the shrimp will crawl backwards out of the old one. You can sometimes see in very colourful shrimp a white line develop where the escape crack will open between the head and the thorax or main body from where the shrimp will molt. The old shell casing can be kept in the tank as the shrimp will feed on part of it to replace the calcium it needs to harder the new shell. Some new shrimp keepers will find these empty shell casings and think their shrimp have died, but then find them later. Normally dead shrimp will turn pink and these should be removed so as not to pollute the tank. Newly molted shrimp may hide for a day or two while their soft new shell hardens. Now, if there has been a successful mating the female will become "berried". This refers to the clutch of eggs that are held under the tail that has the appearance of a bunch of berries or grapes. They will develop and mature with the female until they hatch and either

become fully formed fry ready to fend for themselves or shrimp larvae that will go through an extra stage of development before reaching their adult form.

The three main families of shrimp that we see in the hobby are *Caridina*, *eocardina* and *Macrobrachium* with some other species that I will lump into a fourth group. The first two families are often referred to as dwarf shrimp as they are smaller and usually not more than 1.5 inches in length when fully grown. As mentioned, there are shrimp that can get much larger than that and some of them will be mentioned later. Many of these shrimp can cross breed and hybridize with similar species so it is important to understand which you have and not mix them with others. I have kept species of *Caridina* with species of *Neocaridina* when I didn't have tank space to keep them separate without issue. The following is a chart giving a quick reference of what species can and cannot be kept together.

Dwarf Shrimp Compatibility Chart

	Amano Shrimp	Bamboo Shrimp	Bee Shrimp	Blue Pearl Shrimp	Bumble Bee Shrimp	Cherry Shrimp	Crystal Red Shrimp	Ghost Shrimp	Green Shrimp	Neocaridina heteropoda	Snowball Shrimp	Tiger Shrimp	Yellow Shrimp
Amano Shrimp	F	F	F	F	F	F	G	F	F	F	F	F	F
Bamboo Shrimp	F		F	F	F	F	G	F	F	F	F	F	F
Bee Shrimp	F	F		F	C	F	X	G	C	F	F	X	F
Blue Pearl Shrimp	F	F	F		F	X	F	G	F	X	X	F	X
Bumble Bee Shrimp	F	F	C	F		F	C	G	C	F	F	C	F
Cherry Shrimp	F	F	F	X	F		F	G	F	X	X	F	X
Crystal Red Shrimp	F	F	X	F	C	F		G	C	F	F	X	F
Ghost Shrimp	G	G	G	G	G	G		G	G	G	G	G	G
Green Shrimp	F	F	C	F	C	F	C	G		F	F	C	F
Neocaridina heteropoda	F	F	F	X	F	X	F	G	F		X	F	X
Snowball Shrimp	F	F	F	X	F	X	F	G	F	X		F	X
Tiger Shrimp	F	F	X	F	C	F	X	G	C	F	F		F
Yellow Shrimp	F	F	F	X	F	X	F	G	F	X	X	F	

F = Full compatibility | C = Compatibility with caution * | X = Not compatible | G = Ghost Shrimp may eat smaller or sick shrimp of all species, no risk of hybridization.

This is a list of common names used in the chart above correlated with their species name.

Common Name	Species Name
Amano Shrimp	<i>Caridina multidentata</i>
Bamboo Shrimp	<i>Atyopsis moluccensis</i>
Bee Shrimp	<i>Caridina cf. cantonensis</i>
Blue Pearl Shrimp	<i>Neocaridina cf. zhangjiajiensis</i>
Bumble Bee Shrimp	<i>Caridina sp.</i>

Red Cherry Shrimp	Neocaridina heteropoda
Crystal Red Shrimp	Caridina cf. cantonensis
Ghost/American Glass Shrimp	Palaemonetes paludosus
Green Shrimp	Caridina sp.
Neocaridina heteropoda	Neocaridina heteropoda
Snowball Shrimp	Neocaridina cf. zhangjiajensis
Tiger Shrimp	Caridina Sp
Yellow Shrimp	Neocaridina heteropoda

There is quite a variety of species and colour variations in this family of shrimp. From my research it would seem that even though many shrimp look quite similar but with some variation in colour are being considered separate and distinct species. In the wild they are found in different streams and lakes and will have distinct colour patterns based on the locals in which they are found. Many new species of shrimp are being imported from the Indonesian island of Sulawesi. I have kept a few of these shrimp with varying success. They can be rather sensitive to water conditions. I have also found that their colours tend to fade or change after a few months. There are thoughts that many colour variations are due to minerals and particular foods found in the native habitat which cannot be duplicated in the home aquarium. I have also read of shrimp breeders and collectors exporting new and colourful species in China. In the article that I read on this, it was described as a very secretive business – collection locations for new shrimp are hidden from outsiders and that when a collection spot is discovered that the collectors will poison the stream so that no one else can find these specimens. I have found that these shrimp do best in softer to neutral pH water conditions (no higher than 7.4) and cooler water with temperatures of low 70's F. I keep mine in unheated tanks at about 74 F. General hardness or gH can be 30-40 as they do need some minerals for their shells. They reach an adult size of about 1.25 inches and will hatch out as complete fry in fresh water with no larval stage for the most part.

Caridina cf. Cantonensis – Crystal Red Shrimp

These are the most common and popular of the family. They are often also lumped in the group called Bee shrimp. They are quite colourful and have stripes of white and red. There are other colour varieties such as crystal black shrimp, which are colour variants of the same species. In the hobby they are graded and sold based on the amounts of white that is found in their colour pattern and higher grade shrimp can sell for many times what a simple A or B grade will garner.

Caridina cf. cantonensis sp “Tiger” – Tiger shrimp

These shrimp have a somewhat transparent colour pattern, often blue (blue tiger) with a vein-like dark striping throughout the body (usually a dark purple) giving its tiger name. I have found that there is usually a red colour to the tail. There are several colour variants to this species. There is also a variety known as Golden Eye Blue Tiger. This shrimp has a solid blue colour pattern and the eyes are a bright yellow or orange. I have not yet been able to determine whether this is a colour morph or a different species.

Caridina baibault – Green Algae Eating Shrimp

These shrimp are often sold as algae eating shrimp, although they will and should be offered other foods as well. They are quite easy to breed and the young will grow quickly. They are not as sensitive to water conditions as some other Caridina species. These shrimp will vary in colouration quite readily based on mood and food. They can look beige at times and are not as bright in colour as the neon looking Caridina sp Green that they are sometimes confused with.

Caridina sp. Blueberry – Blueberry Shrimp

When I purchased these shrimp I looked and searched for information on them and found very little. What I did find was a suggestion that the colouration was for local stock only and that the bright solid blue would be lost. That is what happened to my shrimp after a few months. I kept them in soft water (pH 6.8) and kept them as I have described with the Caridina. They had fry quite readily but they did not seem to be a hardy species and my numbers quickly dwindled after about 3 months. The surviving stock had a faint almost translucent blue colour pattern but nothing compared to the original one.

Caridina multidentata – Amano shrimp

This species used to be named *Caridina japonica* but was changed in 2006. It is the famous Amano shrimp that many people look for to help control algae in planted tanks. It grows larger than most in this family reaching about 1.5 inches. It is a very hardy shrimp but propagating can be a challenge as it is one that has a larval stage that must be raised in brackish water. To breed this shrimp, it is best to keep the berried female isolated in a tank and when the fry are released she should be removed and the tank gradually brought to brackish levels. In the wild, larval shrimp will be washed downstream to brackish areas where they will develop. The larvae will feed on plankton and microscopic foods as they grow. They will develop into their shrimp form at which time they will return to fresh water and continue to grow into adulthood. These shrimp have little colour and are rather transparent. They should have small red spots on them to make sure they are true Amanos.

Caridina cf. Propinqua – Orange Shrimp

My research on these shrimp say that they have a larval stage that requires brackish water to develop and grow. One of our club members bought some of these shrimp (or believed that they were this species) and has reportedly found new young fry in the tank without any salt having been added. These are a beautiful bright orange variety from Sulawesi Island.

Sulawesi shrimp

There are many, many new species being found on this island and many are very colourful and expensive. There are new species being found and classified all the time. I have not had a lot of experience with these yet, but look them up in your research and if you see some, you'll be ready to grab them when you do.

The next family of shrimp I will talk about is *Neocaridina*. These shrimp are very similar to the *Caridina* but can be much easier to keep and propagate. They are small, reaching about 1.25 inches at most and can be kept in a wide range of water conditions. I have seen cherry shrimp kept in our hard local tap water to RO water to planted tanks with high levels of CO₂ and very low pH. Water temperatures can also be widely varied from low 70's to 82 or 83 F when kept in discus tanks. They are good scavengers and many people keep them in planted tanks to help control various algae, such as string and hair that can grow between some ground covers and mosses. They are easy to breed and females will produce large clutches of fry that are miniature versions of the adults that will hide and fend for themselves from birth. I have read that cherry shrimp can be useful to have when breeding egg scattering fish. They will clean eggs but not eat them. I have often wondered how save they are being that shrimp are scavengers, but I have never seen any eat any snail eggs that I have had in the tank.

Neocaridina heteropoda – Cherry Shrimp

This is the most popular of the shrimp species in the hobby. They are relatively inexpensive, easy to keep and propagate and are quite colourful. There are now a few colour varieties for the species with yellow and "Sukura" (a bright fire red) becoming common. The species can also be found under the old name of *Neocaridina denticulata sinensis* but has been renamed.

Neocaridina cf. Zhangjiajiensis

This species has many colour variants that are known better by their common names. Blue Pearl is a morph that has a light, almost baby blue hue to it. Snowball or white pearl is an all white colour morph for this species. Again, these shrimp are easy to care for.

The third family of aquarium shrimp is Macrobrachium. These can be found in many parts of the world and vary greatly in size, colour and eating habits. Some are completely fresh water and some need a brackish period for the larval stage to develop. There is little to find on these shrimp, most of what I've found being from Googling articles by other hobbyists and their experiences. I have kept the following two species.

Macrobrachium dayanum – Red Claw Macro Shrimp

I have seen this shrimp kept and bred by hobbyists, but have not found it commercially. It is a feisty shrimp that grows to about 2.5 inches and is predatory. It is known for eating snails but has the claws to catch fish as well. It needs only fresh water for breeding.

Macrobrachium sp. – Blue whisker shrimp claw

These shrimp have become quite popular as clean up artists in the home aquarium. They grow to about 2.5 inches and have very small claws that they use for gathering and scavenging. They will eat fish but normally can only catch them after they deceased. I have had females berried several times and not seen any fry but the females eventually berried again, so the eggs hatched. I have been told that they need a brackish stage for the larva to grow but have not had any success with them yet.

There are many other species of shrimp from different genus. Here are a few that you might find at your pet store.

Euryrhynchus amazoniensis – Blue Zebra Shrimp

This species used to be designated as Macrobrachium amazoniensis but has been given it's own genus. It is a South American shrimp as can be figured out by its name found in Peru. It has a look unlike most shrimp looking for like a scaled down version of a crayfish or lobster, with large (for its size) and walking on the surface very flat. I have not seen it swim like many shrimp will. It only grows to 1.25 inches. It is a nice blue colour but spends most of it's time hiding under cover. I have not yet propagated this shrimp.

Palaeomonetes patulus – Ghost Shrimp

These shrimp can usually be found in stores as feeder shrimp. Many people also keep them in their tanks as scavengers to keep their tanks tidy. I thought them to be algae eaters until I brought some home and did more research on them. They will eat algae if starved but otherwise will tend to eat more foods that your fish would eat or leave behind. I have also read that they are not as easy to propagate as some shrimp because of their larval stage requiring foods small enough to sustain them. I currently have several berried females so I am waiting to find out.

Atyopsis spinipes, Atyopsis moluccensis – Bamboo Shrimp

These shrimp have many common names such as rock shrimp, fan shrimp or bamboo shrimp. They are more of a filter feeder and completely harmless in an aquarium. Instead of claws they have fan-like appendages that they use to gather food. They can grow 4-5 inches in length and are native to Southeast Asia.

Telmatochromis temporalis “shell”

By: Roy Smith

Reprinted from the September 2012 Fancy Fins of the Circle City Aquarium Club

Telmatochromis temporalis sp. “shell” is a Tanganyikan cichlid that belongs to a group that many hobbyists call “shell dwellers” due to their habit of spawning and seeking refuge in the empty snail shells that litter Lake Tanganyika. The scientific name indicates that this is a sub-species of the “normal” temporalis species but I have found little information regarding that species. Temporalis “shell” is a small fish with adult males having a body length of 2 3/4” and females no more than 2”. They are by no means a flashy fish in terms of their appearance but males are a pleasant slate gray color with a few stripes and marks around the face and females are a subdued beige color with some mottling. They are a rather tenacious fish and will hold their own or even defeat much larger fish so don’t expect to be meek or good candidates for a general community tank. Like most cichlids, they will become especially aggressive when spawning and protecting fry. As far as their use of shells, it is mostly the much smaller female that goes in and out of shells. I rarely saw males going into shells.

I have owned this species for quite a few years and kept them in a variety of situations. Over the years I had sold off all of my fry and non-spawning adults and ended up with only one adult pair that spawned quite readily. At one point I had them in a 55 gallon aquarium with a group of haplochromines

from Lake Malawi and I could always tell when the temporalis had spawned because all of the much larger haps would be crowded at the end of the tank away from the very protective temporalis parents.

One thing I always found unusual about the temporalis that I had was that they seemed to be good parents but only up to a certain point. I never witnessed them actually turning on their fry but invariably the fry would all disappear after a couple weeks with perhaps only a few stragglers surviving. It seems to me that the parents would kill or eat the fry once they reached a certain age. With that in mind I decided I wanted to make a concerted effort



Female Telmatochromis temporalis “shell”

to raise up a large group of fry and really spawn these guys right after several years of few survivors.

I put the pair and a few snail shells in a 10 gallon tank with a gravel substrate, a few rocks and a sponge filter. Sand would work better and allow them to fulfill their digging desires but at the time gravel worked better for me and I also knew the nooks and crannies of gravel would give the small fry a place to hide once they left the shell. I raised the temperature up a bit to 78 degrees and after a couple months I saw a few tiny fry starting to poke their heads out of the females shell. The fry are very small but I was able to feed them frozen baby brine shrimp and powdered New Life Spectrum cichlid granules. I left the happy family alone for about 2 weeks but then decided to move the parents out of the

tank to make sure they didn't have a chance to turn aggressive with their babies. It wasn't easy catching the female outside of her shell but I managed to get her and the male out of there and into another tank.

Over the next couple weeks I realized what I had been missing with all of the other times I've spawned this fish. They do not just have a dozen or so babies like I thought but in fact have quite large broods. I was never able to count all of them but eventually the gravel in the 10 gallon tank seemed to be carpeted with *temporalis* fry. I would say there must have been at least 40 of them. They have been pretty slow growing but eat voraciously on anything small enough for them; crushed flake food, grindal worms and the other foods mentioned earlier are all eaten with gusto.

Although not as eye-catching as some other fish, *Telmatochromis temporalis* "shell" is worth keeping for their interesting behavior and unique appearance. Devote a 10 or 20 gallon tank to a pair and you won't be disappointed.



Male *Telmatochromis temporalis* "shell"

HAP Report September - October 2012

Mike Hellweg

Member	Species	Common	Rep	Pts	Total
Derek Walker	Bucephalandra species Sintang*		V	20	3190
Derek Walker	Bucephalandra species Sekadau*		V	20	3210!
Derek Walker	Cryptocoryne wendtii Florida Sunset*		V	15	3225
Derek Walker	Echinodoras sp. Kleiner Prinz*	Kleiner Prinz Sword	V	15	3240
Dwayne Peters	Ceratophyllum demersum	Hornwort	V	5	85
Maureen Green	Cyperus percamenoides*	Giant Dwarf Papyrus	V	10	1305
Maureen Green	Pistia stratiotes*	Variegated Water Lettuce	V	5	1310
Cory Koch	Vallisneria natans*		V	5	5

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

* = MASI First



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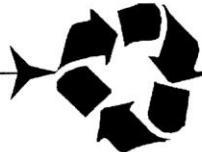
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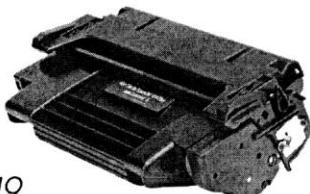
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