

The DELTA TALE

Potomac Valley Aquarium Society Official Publication

Volume 34, Number 3



THE DELTA TALE

Volume 35, Number 2

The Delta Tale is published quarterly for the benefit of the membership of the POTOMAC VALLEY AQUARIUM SOCIETY, Inc., a non-profit educational and social organization. The society was founded in 1960 for the purpose of furthering the aquarium hobby through the dissemination of information and advice, and the promotion of good fellowship among the membership by organized activities and competitions.

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www.pvas.com

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Hank Darin
Alysoun McLaughlin
Rick McKay



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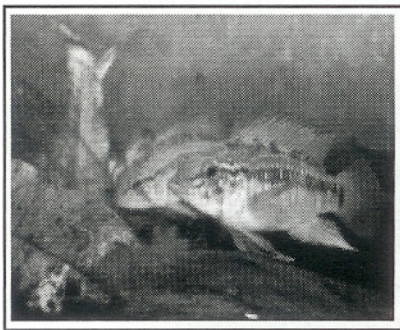
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<u>Exchange Editor</u>	Rodney Conway



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Centreville
Mike Cardaci 703-222-3833
Manassas/Rt.66 corridor far west
Don Kinyon 540-635-9559
Warrenton/Manassas
Gerry Hoffman
Mt Vernon/Alexandria
Gene Moy 703-765-0865
Oakton/Vienna
Rick McKay 703-281-1647
Springfield/Franconia
Pete Thrift 703-971-0594

Maryland
Frederick
Dov Goldstein (301) 694-7582
Northern Prince George's County
Francine Bethea (301) 809-3894
Southern Prince George's County
Lorne E Williams (301) 630-7674



JULY-SEPTEMBER 2003

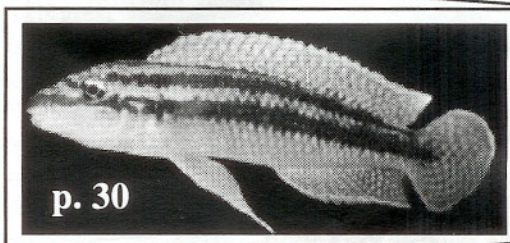
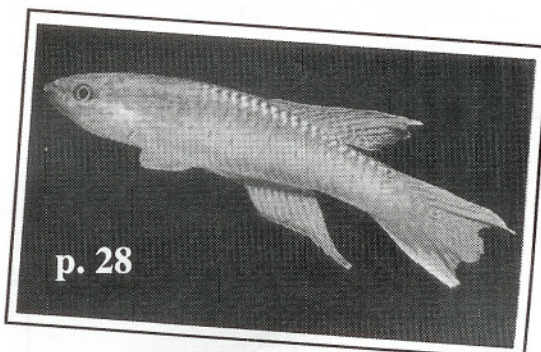
Cover Photo:
Apistogramma macmasteri
Francine Bethea

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One of the reasons our meetings, workshops and auctions are successful is the support we get from manufacturers, their representatives, and local aquarium shops. We would like to extend our thanks to all who donated their products, time and effort to make our events successful.

Industry Supporters:

Aquarian Flake Foods
Aquarium Pharmaceuticals
Aquarium Systems
Aquarium Technology
Cichlid News Magazine
Coralife/Energy Savers
Feller Stone
Freshwater and Marine Aquarium
Ginger Products Co.
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TFH Publications
That Fish Place
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Montgomery Tropicals
Rick's Fish & Pet Supply
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Totally Fish
Tropical Fish World
Tropical Lagoon

Virginia Shops:

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Aquatic Enhancement
Cordis Fish & Pet Supplies
Creatures 'N Critters
Discount Pet Center
Custom Aquarium Concepts
DBA - The Marine Scene
Foxmill Pets location 1
Foxmill Pets location 2
The Marine Scene

Organizations:

Kingfish Services
Gwynnbrook Farm Discus Fish Hatchery
Fishpost.com

New Gifts For PVAS

Nancy Johnson

PVAS's raffles are getting a re-charge with donations from a number of new sponsors. Many of them are web-based companies, so you can visit them without even leaving home! Please check them out when you need to stock up on food and supplies for your tanks!

Walt Strand

Strand's Tropical Fish

Iron Mountain, Michigan

(906) 774-6968

ebay ID: wnstrand

As a hobby/small business, Walt sells very high quality fish foods on eBay. I have been using his spirulina pellets for a number of years, and when I had breeding cories they did very well on them indeed. Walt donated some great foods and hard goods that members will be able to take chances on at upcoming raffles. His prices are great, and you can contact him to buy directly from him at wnstrand@uplogon.com.

Disney Debbie Bohl

6123 Halfmoon Dr.

Port Orange, Fl. 32127

(386) 322-8502

dbohl27982@aol.com

ebay ID: disneydebbie

While perusing eBay one day I noticed these 8-foot plastic plants for sale. Turns out these plants were destined to decorate the Undersea Adventure (submarine) ride being renovated at Disneyworld in Florida, but Disney decided not to re-open the ride.

Debbie buys lots of discontinued Disney paraphernalia to sell on eBay, and generously donated a large box of these long strings of plastic plants to PVAS. For fish-nuts, they could be used to provide cover on a large tank or pond, or to decorate for your next party (hey, something different). Look for these plants at upcoming meetings and at the Fall Fish Festival, and if you'd like to get some quickly (and very inexpensively) check out Debbie's site on eBay.

Python Products Inc.

7000 West Marcia Road

Milwaukee, Wisconsin 53223

Phone (414) 355-7000

Python donated a brand-new Python tank-cleaning system. Look for it as a raffle prize at the Fall Fish Festival auction!

Hellolights.com

Hellolights.com has offered PVAS members discounts for some time, via their e-mail list. When I asked for a donation, they generously sent several items from their incredible line of lighting products. Not only do they have just about any fluorescent, compact fluorescent and metal-halide product you could wish for, they also now offer Coralife's freshwater Aqualights in 24-in, 36-inch and 48-inch lengths. Do-it-yourself or buy it ready to go, but check with Hellolights when you are shopping for lighting products.

Premium Aquatics Inc. Marine Livestock and dry goods

5350 Barker Lane, Indianapolis, In. 46236; <http://www.premiumaquatics.com/>.

This great web-based company donated a portable refractometer and two cans of Omega One flake food.

What's a refractometer, you say? Well, it's a fancy (and accurate) hydrometer for measuring salt content in aquariums and ponds. This Acquamarine model is guaranteed for 1 year, has automatic temperature compensation and allows for low level readings and fine resolution. The Acquamarine Salinity Refractometer yields precise low-level readings to ensure proper salt content even in freshwater tanks and ponds. Who will be the lucky winner of this great raffle prize?

Premium Aquatics is "a family-owned and operated aquarium business since April 1996. Starting from a 10x12 room in their house, they have moved into a 3200-sq-foot commercial warehouse with 3 - 600-gallon pools for live rock & sand, 3 - 6 foot x 2 foot x 16" tall coral tanks and 1000 gallons of fish tanks. They have 350 feet of shelved inventory stacked to just about the ceiling. Their success has come from hard work, good prices and honest answers and service, plus a

personal touch, which they will always strive to keep." Check them out at

<http://www.premiumaquatics.com/>.

House of Tropicals in Glen Burnie donated a \$25 gift certificate that will be raffled off in the next few months. This is one of many local stores that give our members 10 percent off all livestock. When you buy fish, be sure to present your PVAS card and ask for a discount!

Cordis Fish and Pets in Manassas has donated a number of very nice filters and other hard goods to our auctions and raffles in the past year. Owner Evelyn is not yet able to offer a discount on livestock, but welcomes all to her clean and well-run little shop offering both freshwater and saltwater livestock. Check her out at

9067 Liberia Ave.

Manassas, Va. 20110, 703-365-8966

—less than 20 minutes from the beltway!

Fox Mill Pets has also been a generous supporter of our club in the past year. Check them out at two locations in Herndon:

Herndon Center

404 Elden Street

Herndon, Va. 20170

Phone: 703-435-5541

Franklin Farm Village Center

13300 Franklin Farm Road

Herndon, Va. 20171

Phone: 703-464-0962

Thanks also to **Enchanted Discus** and **Wet Pets** for donations to the June 1 all-day auction. When a company or hobbyist donates auction items to the club, the club receives the entire selling price. These donations are very important in helping PVAS raise money at our all-day auctions and raffles, which are the club's only source of revenue.

See a complete list of our generous sponsors at the PVAS web site, and please consider patronizing these companies!

Thank you to all!



Summer Auction

Gerry Hoffman

Here is a quick set of numbers from the auction on Sunday. Emily will provide us with better statistics after she completes the checks to the sellers. For now, here is what I deposited for the club:

Auction Gross \$5536.00

Raffle Gross \$ 298.00

Membership \$ 21.00

Expenses at auction—\$60.00 (sodas, McDonald's, etc)

89 registered bidders

We used about 500 bidding slips that were printed up (we ran out of the new style) Total of items sold, donation items, etc. will be provided later on.

The auction ran very smoothly and there was lots of help from the "regulars." Larry Wilkie and George Richter were there just before 8:00 and were already setting up tables when I got there a few minutes later. George and David Snell set up the PA wireless system quickly and with no problems; Mike Brem was there early to collect driver's licenses and register bidding numbers', Larry and Mike Kaiser, without asking, helped register the sellers and their pages of items to sell; Hank helped out with the treasurer's table at checkout time; Nancy had her Raffle table ready to go by 9:00; the "bag lady" John Mangan was set up well ahead of time; and we were registering and giving out numbers by the 9:00 time we said we would be open. Lots of others helped with the paperwork at auction time (Pete Thrift, Gene Moy, George Richter, Larry Wilkie, and others) David did a fine job auctioneering for most of the afternoon, Rick

helped out with the large hardware items even though it was his birthday, Andrew was around doing everything from early AM until the end. I talked Pete Thrift into making the run to McDonald's for burgers and fries, and he always bring the cooler of sodas on ice. We had a few people come from Raleigh, one fellow from North Jersey, and many of the same old faces. Special thanks to Mike Brem for filling in as Treasurer for the day, and to Emily for her part in calculating the 1/3-2/3 splits and writing the checks and giving us the statistical data in the next week. I know there were others there fairly early, people like Kenny Warren who likes to move bags around the tables. If I left out anybody, I apologize.



—Membership Update—

Rodney Conway

Welcome to the new and renewing members!

Deborah B. Childress

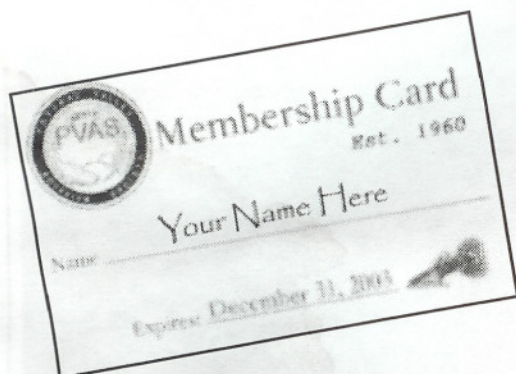
Sherry Mitchell

Lester L. Gutduer

John Hendricks

Bruce Cauley

David Soares



Please note your memberships are valid through the end of 2003.

—Board of Directors—

Michael Brem

Minutes from the May 12, 2003 PVAS Board Meeting

Meeting called to order at 7:25 p.m. Board members present: Hank Darin, Emily Novotny, Gerry Hoffman, Francine Bethea, David Snell, Terri Vance, Andrew Blumhagen, Rick McKay.

First order of business: We received notification today (5/12/03) that we have finally been granted a 501c-4 nonprofit organization by the IRS. This means the club will no longer have to pay taxes on our income.

The issue of bulk mailing of the Delta Tale and auction flyers came up as a way we could save more money, but there are strict rules that must be adhered to in order to use it. Mail must be either bar coded or sorted by zip code and must always be mailed from the same post office. It was decided it was something we would look into later.

A motion was made and passed unanimously to give PVAS member (and lawyer) Evan —(?) a \$50 restaurant gift certificate as a way for the club to thank him for all his work to get the club the 501c-4 status.

Brief discussion on the ongoing effort for the PVAS to possibly hold a Catfish oriented workshop in 2004 (or is it 2005). The event is getting support from catfish experts are the world and several have already signed on as possible speakers. This would be an event that would draw people internationally. Questions were raised about being able to ship fish to local airports. Dulles and possibly BWI accept fish shipments, but not DCA, so this could impact where the event may be held. The hotel also has to be big enough to hold a banquet to could seat upwards of 200 people.

Part of the support for holding a Catfish Festival has come from David Borshuwitz at TFH magazine. TFH will give the event a great deal of

promotion, including an article in an upcoming "Catfish" issue of the magazine. The list of people getting on board the event is growing steadily.

The BOD has decided to produce a new club t-shirt. Rick McKay gave some preliminary prices he had gotten. Estimated cost for t-shirts would be \$8 to 10 each. Embroidered golf shirts could cost as much as \$25 each. Before prices can be finalized we need to have a design, so Francine proposed a design contest open to all PVAS members. The person who comes up with the winning design will receive a \$50 gift certificate to Aquarium Center. The BOD will pick the winning entry. Deadline for submitting entries is (WHEN??).

Auction czar Gerry Hoffman went over the details of the upcoming June 1 auction in Gaithersburg at The Activity Center at Bohrer Park, 506 South Frederick Avenue. We can get into the building at 8 am, but we have to be out by 5 pm. We have seller stickers left over from past auctions, so we will use them up before printing new ones. Everything is taken care of except that Treasurer Emily Novotny will not be able to attend because of surgery. Mike Brem stepped forward to take her place at this auction.

A possible change in the auction was discussed. We are going to look into letting buyers bring items up for early sale if they pay a \$2 cash fee. This will only be allowed after 1pm. This is done at other auctions. Rick McKay will research it and post how other clubs word it to the BOD list to see if we want to do this. The June auction is traditionally the smallest, so it was thought it might be a good time to give it a try.

Meeting adjourned at 7:53 pm.

No BOD meeting June 9, 2003

PVAS Calendar

AUGUST

MONDAY

Meeting August
Doors open 7:30 pm

Bowl Show
Mini Auction
Door Prize
Raffle

SEPTEMBER

MONDAY

Meeting September 10th
Doors open 7:30 pm

Bowl Show
Mini Auction
Door Prize
Raffle

President's Message

Andrew Blumhagen

For this issue of the Delta Tale I wanted to thank everyone for making our monthly meetings a great success. Our attendance has gone up this year to almost 40 people per meeting, on average, up from about 25 last year. A lot of of you who are coming to the meetings are new members and we heartily welcome you to the club. Some more of you are folks are one-time members who drifted away from the club but have started coming to meetings again. We heartily welcome you back. And for those regular members who are simply making an extra effort to make more meetings than usual (we all miss one from time to time...) thank you for coming too.

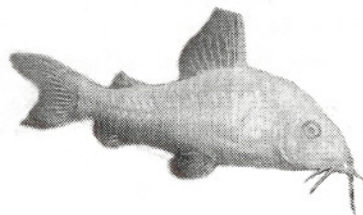
To all those folks who have joined in the last year or so, we are very happy to have you with us. We hope that we are providing a good experience for you and that you are learning about the aquarium hobby and expanding your interests in it. If you have questions or suggestions, by the way, please let me know. You might be surprised to hear that most of the officers and committee chairs who run the club have only been members for a few years.

One of the ways that we have gotten to know people in the club and gotten more involved is by working on some of the events sponsored by PVAS. Coming up there will be plenty of opportunities to do so. Working on auctions, our most popular events, are a good way to get to know some of the people who have been around for a while. As you can imagine, it takes a good 15 to 20 people to run an auction successfully. Two "positions" in particular are good ways to get started. Runners are the people who take the auction items from the auctioneer to the buyer. It may not seem like much, but it's absolutely critical that we have these people for the auction to run smoothly. Recorders are the folks that you see sitting up at the tables next to the auctioneer. They keep the records of the auctions so that we know how much money to collect from buyers and how much to send out to sellers. One of the advantages of doing these tasks is that you never miss an item that comes up for sale. If you would like to try your hand at one of these, make yourself known to one of the people you see working the event.

In addition, the Fall Fish Festival is coming up. We have revived the Fish Show as a part of our yearly event. This is an accomplishment in and of itself since many aquarium societies are abandoning their shows. They take a lot of work. This year we are setting up for the show on Friday, October 24. We will be building stands, placing up to 200 tanks, filling the tanks with water and setting up the air system for all of the tanks. The more people we have, the easier (and more fun) it is. In addition, we'll need help from people to receive entries and put them into the correct tanks, as well making sure that when the show is over the entries go to the proper owners in good health and that the equipment is broken down and put away. In addition to help for the show, we'll need volunteers to help at the registration desk.

The primary reason that PVAS is doing so well right now is that more people than ever are pitching in to help with the administration of the club. If you want to help out but don't know quite where to begin, we'll be happy to show you. Of course, we're happy to have you just enjoy being a member too.

pvas@pvas.com



Editor's Tank

Francine Bethea

In May this area was bombarded with a multitude of rain showers. Although a lot of you were not happy about the continuous days of precipitation. I, however, reveled in the copious amounts we received. For a die-hard fish keeper like myself there are many benefits to being dumped on.

First off, you had to admit the temperatures were pleasant. So much so that it encouraged me to clean up all those extra tanks and containers that somehow amassed next to the house. Moving the tanks propped up against the foundation of the house allowed me to cut the grass and wild strawberries that grew up into the tanks. Then there was the compost pile that got tidied up and freed some of those earthworms to feed to my fish.

Secondly, the frequent showers kept the mosquito larvae abundant. However, I did have to employ measures to keep their numbers under control. Then there is the daphnia population that I have finally gotten to sustain longer than a few weeks. As you may or may not know, I have a tendency to buy all of the available daphnia at our auctions to feed my fish. These days I have become much more determined to get a viable culture going instead of feeding the bags I get directly to my tanks.

With so much rain in June I just had to have more rain barrels. The two I already had provided a good source for water changes, but it still wasn't enough to provide for my 28 - 30 tanks. A few more would store more, don't you think? Nevertheless, I added three more barrels and daisy-chained them together with an assortment of PVC fittings and pipe. I worked late into the night and finished just as it started to rain. In a matter of minutes, the barrels filled to capacity - 275 gallons!

With a large amount of water sitting around the mosquito populations would overwhelm my neighborhood. To alleviate possible problems of getting bit a lot and complaints from the neighbors, I cut several screens to fit frames and covered the tops of the barrels where I cut holes in each one to drop the sump pump in for empty-

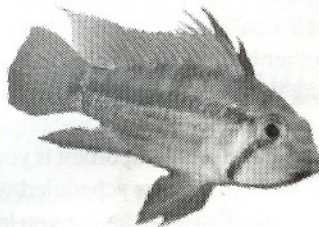
ing. I haven't gotten around to attaching a hose bib spigot to each of them yet. Needless to say, I've got fry out the ying-yang with all the water changes and live food.

Everything is so green and gorgeous outside I felt an urge to bring some of that beauty inside. So much so that I've decided to actually work at a planted tank; or two or three. Anyway, I have a lot to learn in that regard. But I'm buying some of the things I need now and learning a thing or two about doing-it-yourself projects for some of the materials and methods implemented in Aquascaping.

Now it's July and I'll soon be vacationing in downtown Cincinnati at the American Cichlid Association Convention. I look forward to seeing old friends and making new ones. Although it is not quite the same as visiting the country of where most of my fish hail, there will be plenty of fish from all over the world to be found in the hotel rooms. I'm going to start getting rid of some of the fish I have to make room for new ones.

Also I have to start getting my fishroom prepared for my absence during those 5 days. I don't employ anyone to feed my fish so there are a few steps I have to take to ease my concerns while I'm away.

So as you can see, this installment of The Delta covers a lot of the many facets of fish keeping and much that I can glean some good information from. I hope you get something from this issue as well.



Francine

Vacation Time

John Mangan

With the warmer weather upon us many are starting to think about getting away for a well deserved vacation. The only problem is – what do you do with your fish? The last time you took Jimmy the goldfish to grandma's house with you, you found her false teeth soaking in his bowl. You don't want to go through that again! The snooty five star hotels in Maui said no pets allowed. So there goes that option. Now what are you going to do? Don't worry. Going away on vacation when you have fish is not a big deal if you plan ahead a little.

The first thing that probably comes to mind about leaving your fish is what about feeding them. You could have a friend or neighbor come by and feed them while you are gone. This is usually just a disaster waiting to happen though. Unless the person coming in is an experienced fish keeper they will overfeed. It doesn't matter that you showed them how much to use. Back when I worked in pet shops I heard countless stories of this happening. Even if you are lucky enough to have someone with fish experience available they won't know your particular fish nearly as well as you do. Another option is the many different types of vacation food blocks you can buy. While most of these work fairly well, if you have a large number of tanks this option can get expensive. Also, most of these blocks are too big for smaller size tanks and will end up making a mess. The best option by far, and the one most people have the most difficulty doing, is to do absolutely nothing. No feeding at all while you are gone. "But I'm going for a week. They'll starve." It will take a long time for a healthy fish to starve to death. While on collecting trips I have had fish caught at the beginning of the trip go for two weeks before finally getting put into my tanks and fed. So those fat, overfed, pampered fish in your tanks can go that long, and longer. Another benefit to this method is that since they aren't eating they aren't going to be producing much waste. This will help keep up the water quality in the tank while you are gone. Very important if you are going to be gone long enough to miss scheduled water change. Don't try feeding the fish extra before you leave.

This will just cause problems with water quality. You're better off with slightly hungry fish in clean water.

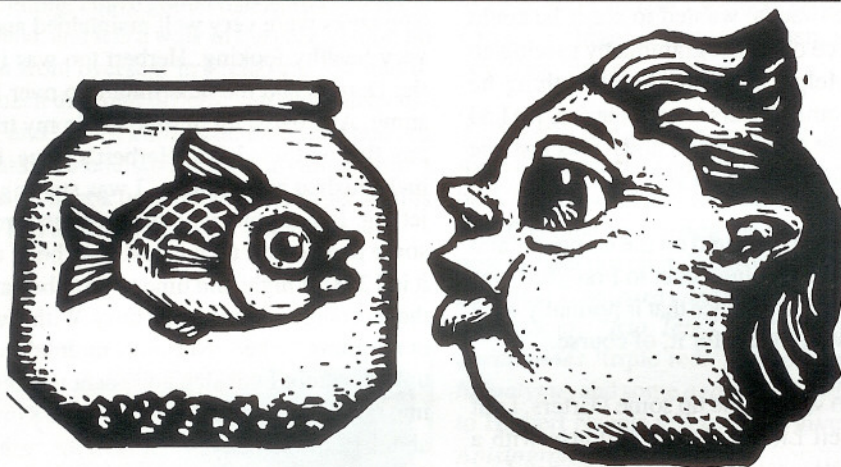
If you can plan ahead you should also make a few adjustments to your maintenance routine before leaving. Keep up with your regular water changes and, if possible, make them a little larger than normal. Try to have the water quality as good as possible before leaving. **Do not** make a water change right before leaving though. You never know when a water change might cause some kind of problem to the tank. Give yourself 3 or 4 days between the last water change and when you are leaving. This will allow time for any problem to occur while you are still there to deal with it. Make sure the filter is clean and working properly. As with the water changes **do not** clean the filter right before you leave. When you clean most filters you are losing a lot of the biological filtration that was taking place in it. In many cases you may have an ammonia spike after cleaning a filter. A slightly dirty filter is actually much better for the tank than a nice clean, sterile one. I usually won't clean a filter if I am leaving in less than a week. Try to do the filter cleaning about two weeks before leaving. This will give ample time for the biological activity to restart (if you need to clean your filter more often than every two weeks then you either need a different filter, or you are overfeeding or overcrowding).

Check your lights and be sure the bulbs aren't getting close to burning out. Look for slightly blackened areas near the end of fluorescent bulbs. The darker the area, the closer the bulb is to going out. It is also a good idea to put the light on timers. Besides keeping your fish and plants on a normal light cycle this is also a good general security measure since you aren't going to be home. Lights going off and on make the place look more occupied. Having your lights on timers just makes life a little easier even when you are home.

Make sure any other equipment, such as the heater, is also working properly. If someone is coming in to check on the house or feed other animals show them where the filters and pumps are and how to tell if they are working. If possible have back up equipment available. Rather than someone having to figure out what is wrong with the power filter have a spare ready to just pop onto a

tank and plug in. When I upgraded my air system I kept my old pump and always put it out next to the new one when I go away. That way if there is a problem it is simple to just switch them. Be sure to stress though **do not feed**.

If you follow these few guidelines then you can go off on your vacation and be reasonably sure your fish will all be alive when you return. Whatever you do though, don't bring your fish one of those t-shirts that says "my owner went to Maui and all I got was this lousy t-shirt." They really hate it when you do that.



★ Articles Needed! ★

Goldfish-Angelfish-Discus-Loaches-Killifish-Tetras-Corydoras-Loricaridae-Crenichichla-Live Food Culturing-African Cichlids-Plants-Central American Cichlids-Book Reviews-Product Reviews-Anabantoids-Rainbows-Diseases-Photography-Salt-water-Reef Tanks-Shrimps-Apistogramma-Tank Setups-Tank Problems-Algae Problems-Guppies-Pirahna-Koi-Mollies-Gar-Ponds-Pencilfish-Fish Shows-Fish Shops-Eels-Sharks.....

Trip to Germany 2003

David Soares

During the first few months of this year, my German colleague had been asking me to come to Germany and take care of some business we needed to get completed. At the same time he wanted to see if he could develop a new source of *Apistogramma* by placing an order with Julio Melgar in Peru. Another thing he wanted was to get some Darters from America. He had been asking me to get some for him and it was just one of those things I hadn't gotten to yet.

In February I was fooling around on the computer and saw that the price of an airline ticket to Frankfurt was down to \$500.00 round trip! Since that is normally what it costs to fly one way, I went for it, of course.

The next thing to do was to line up some Darters. I put the word out on Neil Lilliedolls site and also with a few of my good customers. I got quite a few good responses and ended up getting fish from Ray Katula, Dustin Smith, and Dr. Benjamin Keck at the University of Tennessee. The response to my request was great and I ended up with a lot more fish than I thought I would. Jenny Kruckenburg, the darter lady of Minnesota was a big help here too. I ended up with 11 species and about 90 fish. I put them in with my guppies and they all got along fine.

Now, when I bought the ticket there was no war on, but by the time I left there was. The airline offered to let me take the trip at another time at no cost, but I declined. You see every time I go to Germany this kind of stuff happens. When I first went there for the Air Force in 1971 the Black September terrorist group hijacked the Munich Olympics a week after I arrived and the Baader Meinhoff gang blew up some air police at a guard shack. The terrorists continued to pull this kind of useless cr— the whole time I was stationed there. When I was sitting in Uwe's living room in Sept 2001 the airliners flew into the towers, so my thoughts are that the sooner I go and the quicker I come back the better it is for everyone!

I left for Germany on the 27th of March and made it no problems, except that Uwe was late to pick me up but since he always is, it is expected and a notice on the public address system at the airport in Frankfurt always straightens things out. Since it was a Friday it was not a good day to go to Glasers but we did go to Herbert Nagels. I was very impressed with this importers business. It was very clean and open and light in his place. The tanks were very well maintained and the fish were very healthy looking. Herbert too was impressed with the Darters and the next time I go over I will take him some. As I had a lot of time left in my trip I did not get any fish on this visit to Herbert's place. By the time we had finished at this place, I was starting to suffer from jet lag. For anyone who hasn't gone through this (and some people don't!) it is just your body telling you that it is 12:00 at night and time to go to bed and not 11:00 in the morning and time to get busy. With Uwe though there is no going to bed. Not until midnight of that day! So unfortunately I got sick and spent the next day recovering, this wasn't caused by the Burger King either! I spent about 12 of the next 24 hours in the bathroom I think. I don't know why, but on this trip I had a difficult time with the jet lag thing, usually it doesn't bother me too much, but this time it did.

The next few days were spent in preparing things for the fish that were coming in from Peru. Uwe has about 50 tanks in the University and we cleared space and cleaned tanks. I believe that Uwe saves some dirty tanks up for me to clean so that I will feel at home, it is a nice touch! I also spent some time helping some of Uwe's colleagues (and also my German friends) clean up the English on some papers they had written. I learn about some of the strangest things by doing this. One of Uwe's friends, Ingo Hahn, is following in Darwins footsteps and is doing some work with a bunch of little birds that live on some islands in the Pacific off the coast of S.A., very interesting stuff! Also, one of the most enjoyable aspects of a trip to Germany is joining in the life of the family. Uwe has a wonderful and talented (also beautiful!) wife named Erika and two great kids Isis and Leonard. It is fun to go pick the kids up at school and to play with them at home, and to go shopping and just to do all the things that you do in a normal day. Uwe and Erika have recently moved to a beautiful place in the country so there is lots of room.

We even had a barbeque! But, of course, the best food are the Hungarian dishes that Erika fixes, since she is Hungarian, she does a great job with them.

The day came when the fish were to arrive and we met a friend of Uwe's at a small inn in the country on the way to Frankfurt. When we arrived at the airport we had a very rude awakening. I have gotten fish from Uwe at the airport in Portland, and it is a walk in the park compared to getting them from overseas in Frankfurt. We had to visit about a dozen different offices, veterinarians, customs, wildlife, and I don't know who else all needed to be seen and paid! No one would sign anything until a fee was paid. In all it took us about 6 hours to get all this done, we even had to stop and go eat lunch.



F. Bethea

Finally, though, we got the boxes, there were 10 (?) in all, and took them back to the University. A friend of Uwe's, Wolfgang Friedrich, who owns the largest and nicest fish hatchery I have ever seen (more on this later) met us there since he had ordered fish too. At this point we were very optimistic since, at the airport the vet told us that he had inspected the fish and they were all fine! So off we go, back to Bielefeld, with another stop at the Burger King! I eat more whoppers in a week in Germany than I do in a year here in the States! Well, nothing could have been further from the truth. Half of the fish had arrived dead and the other half was in the process. Also a bunch of fish that we had ordered were not included and some that we hadn't ordered were. Well so much for the entire vet and other fees at the

airport, we now know that beauracrats are the same wherever you go. Talk about disappointment, Uwe had worked on this for a month or more and now there was nothing. Wolfgang was very mad also. There was nothing to do but to try and take care of the fish we did have so we tanked them up and hoped for the best. Over the next few days about a third of these died. All in all of the 150 fish I wanted 28 made it back to the home. My biggest disappointment was that all of the new fish "Freser" were gone.

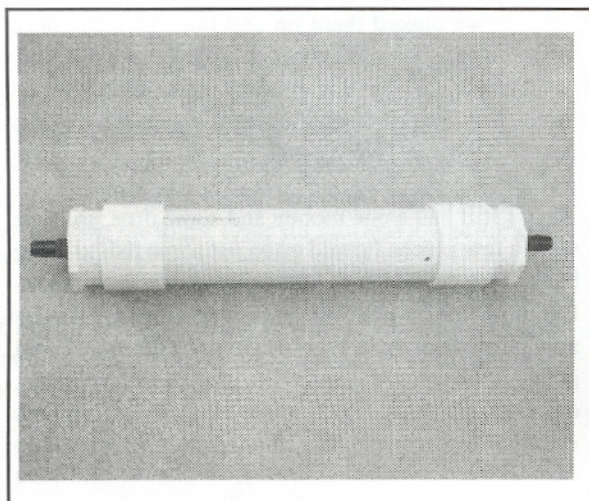
Well, I still had some money and some time, so there were a few places I could go to get some fish to bring back. Two days later we made another trip to Frankfurt, this time by-passing the Burger King, as I was by now burned out on it. We first went to Glasers where I got some *Taenicara candidi*, *Apistogramma wilhelmi*, *agassizi* cf. "Rio Tefe", some nice *Apistogramma cacatuoides* 'triple reds', some giant *Apistogramma hippolytae*, and some *agassizi* cf. *belem*. We next went to Herbert Nagels where I was given some very nice *Apistogramma hongsloui* cf. *Rotstrich*.

On the day before I left we went to Uwe's friend Wolfgang's hatchery and bagged the fish for the flight. Wolfgang gave me some very nice Rams which have already spawned for me. Of the other fish, all have spawned except the *Apistogramma hippolytae*. This includes the *Apistogramma* cf. *Belem*. Of the fish I ordered from Julio Melgar, I managed to get the *Apistogramma agassizi* cf. *Tigre*, and *Ampiyacu*, the *Apistogramma bittaeniata* cf. *momon*, and the *Apistogramma Algodon I*, back to the hatchery and they have all spawned for me.

I have at least come away from this trip with all tanks in the hatchery full and have been very busy, as of now we are producing about 300 fish a month and the vast majority are *Apistogramma*, though I hope to get the *Taenicara candidi*, *Biotoecus operculais*, (Rio Tapajos from Uwe), and *Crenicichla regani* going, these are fish that we don't see too often over here. So for now, until my next trip, I will be busy enough!

EXTERNAL INLINE CO2 REACTOR

Ghazanfar Ghorri



I was running CO2 into my Eheim 2026 canister and was having trouble keeping CO2 levels high enough in my 75G, heavily planted tank. Pumping more CO2 caused a lot of burps and sometimes the reactor would airlock. It was time to use a CO2 reactor, but I didn't want to spend too much so I decided to build one.

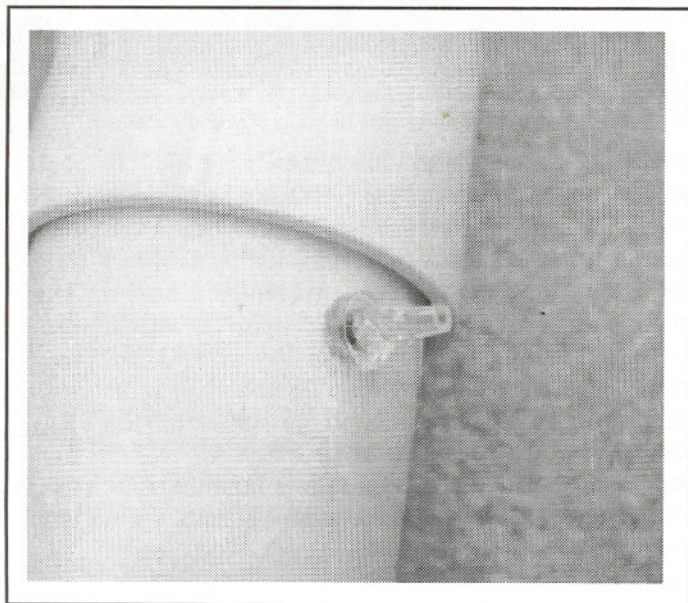
My DIY CO2 reactor is based on the Barr method, but I hate adding more equipment into my tank, so I designed it to run inline with my canister. I made two reactors, the only difference between them being the barb size. I'm running them inline with my Eheim 2026 and 2213 on the filter intake.

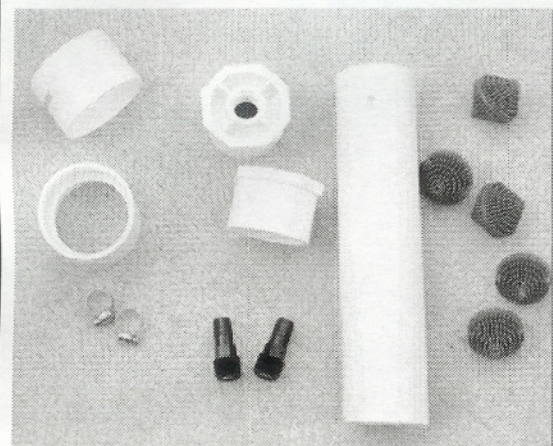
Initially I used a different design that would be inline on the filter outflow - only clean water enters the reactor, less muck to deal with, but I noticed a signifi-

cant reduction in the flow rate. I ended up putting it inline on the filter inflow. As I write this article, I've been running the reactor with no clogging issues yet for 2 months. If it does start to clog up, I'll simply take it off, run some water at high pressure through it to clean it out and pop it back on. If you're worried about it - you can use a pre-filter on the intake tube. That will catch any larger pieces of debris.

Almost everything was bought from Lowes but Home Depot carries most of this stuff too. Under \$10 cost per reactor for parts and took me about 20 minutes to put most of it together with PVC solvent glue and a little 'Plumbers Goop' (can use epoxy) for the airline connector. I put Teflon tape on the barbs before I screwed them on to eliminate leaks.

I chose not to attach a 'hang on' piece; instead I secured the hoses with clamps; much cleaner. I'm getting 100% dissolution. Now I can crank up my CO2 without worrying about air locking my Eheim's. No more burps!



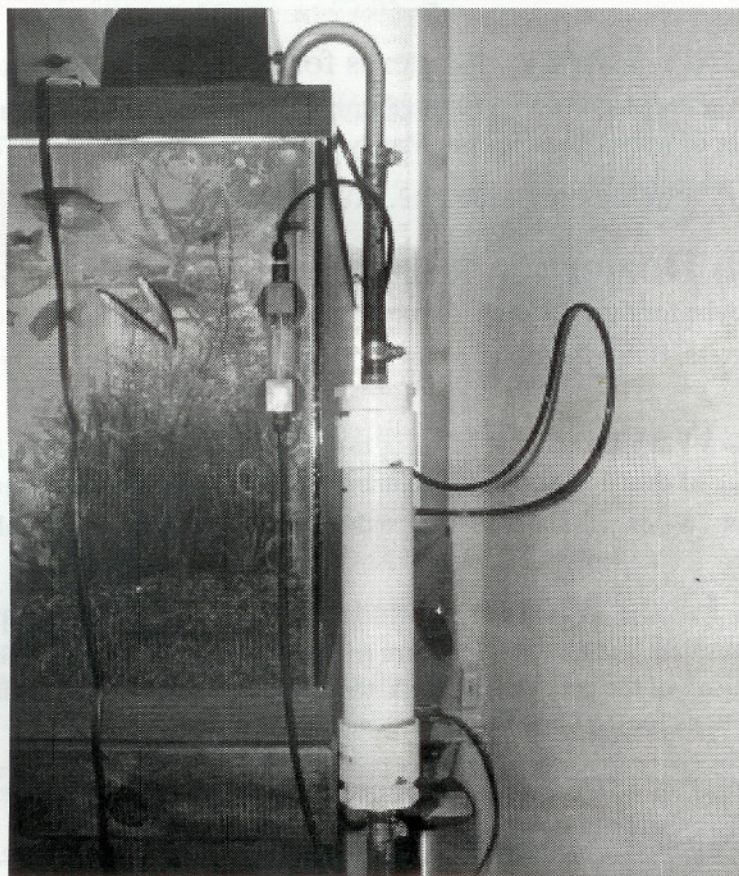


Parts used:

- One 10" length of 2" diameter PVC
- Two 2" - 1/2" (female) reducers [the end caps]
- Three 1" hose clamps
- Two 5/8" hose barbs (male)
- Teflon tape
- Five Bioballs (from local fish store)
- One airline connector (from local fish store)
- PVC solvent glue
- Plumbers goop [waterproof resin glue]

TIP:

You can use cheap plastic scrub pads from the dollar store if you can't find the bio balls. Just make sure they're inert. Good luck!





Saturday Workshops

Randy Carey "Patterns for Breeding the Scatterers"

Prolific Breeder of over 170 Aquarium Fish Species, author of many hobbyist magazine articles and master of www.Characin.com. Randy will show us how to breed Tetras, Barbs and Rasboras in this new presentation.

Bob Dozier "A Reintroduction to *Betta splendens*"

Hobbyist for over 40 years, former President and current Board Member of the International Betta Congress, Bob will give us a new look at an old but popular aquarium fish.

Dr. Wayne Leibel "Pikes, Eartheaters and Acaras" and "*Geophagus*"

Author of over 150 hobbyist magazine articles and former President of the American Cichlid Association, Wayne will introduce us to these increasingly popular cichlids from South America.

Dr. Greg Morin "Chemistry of the Planted Aquarium"

As President and CEO of Seachem and an avid aquatic gardener, Greg will teach us about water chemistry of the planted aquarium, the biochemistry of aquarium plants and how to provide perfect conditions for the underwater garden.

presented by The Potomac Valley Aquarium Society

For details and updates see www.pvas.com

Speakers and Show Classes subject to change



Fall Fish Festival 2003

October 25-26

SPEAKERS BANQUET SHOW 1ST 2ND 3RD TROPHIES RAFFLES AUCTION

Fish Show Classes

Class I: Cyprinids

Class VII: Natives

Class II: Catfish

Class VIII: All other Freshwater

Class III: Killifish

Class IX: Aquatic Plants

Class IV: Livebearers

Class X: Biotope Aquaria

Class V: Labyrinths

Class XI: Photography

*Class VI: Cichlids**

Class XII: Arts and Crafts

**Sanctioned by the ACA*

Industry Representatives: Kingfish Services Marineland Seachem

Daphnia -

Hopefully Easier for You Than Me!

Rick Dotson

photo by author

One of the most popular live foods for aquarium fishes is Daphnia. Daphnia are small freshwater crustaceans found all over the world. Daphnia reproduce very quickly making them an ideal tropical fish food to culture. The family Daphniidae contains several genera of freshwater crustaceans collectively called daphnia or water fleas. Some of these genera are Daphnia, Monia and Bosmina. Daphnia includes several species, the largest of which is *D. magna*. *D. magna* can reach a size of 1/5 of an inch in diameter. The newly born young of monia are smaller than baby brine shrimp and make an excellent food for the fry of many fish. Tropical fish eagerly eat all water fleas.

Daphnia are filter feeders and eat almost anything that will float in the water. Everybody has a favorite daphnia food and swears by it. I have found that green water from an overfeed goldfish tank combined with small amounts of dried milk seems to work best for me. I have also used yeast with good results and still feed this once a week. Other foods are dried manure, soil extract, wheat, rice, and gram flour, you get the idea. One food used by hobbyist is called Delicious Daphnia Dreams. It consists of 8oz. frozen peas, 3oz. carrots, some paprika and 2 multivitamins. The ingredients are blended with a little water and then placed in a net and squeezed. The juice from this mix is saved and added to a gallon of water. This water mix is feed to the daphnia. The nutritional content of daphnia depends on what you feed them. Some breeders enrich their daphnia adding vitamins and Omega-3 fatty acids to their feed. I feel that daphnia grown with algae are more nutritious and the tank seems cleaner and more stable. Daphnia cultures usually crash from overfeeding or under harvesting. With time you will develop a feel for how the culture is doing, how much to feed and when to harvest.

I have found that daphnia like hard alkaline (about 8.5 pH) water conditions. They need calcium to produce their hard shells. As they grow they molt their shells

similar to our local crabs. The shells will litter the bottom of the culture. Daphnia are sensitive to metal ions such as copper and zinc. They are also intolerant of pesticides, detergents and bleach. Daphnia are often used in toxicity studies because they are sensitive to environmental changes. I only use water from an established aquarium to do water changes or for growing algae to avoid any problems associated with city water. Daphnia can tolerate low oxygen levels because they produce hemoglobin and this is responsible for their red color. Daphnia generally have a temperature range of 32 degrees F to about 90 degrees F. Temperatures in the high 80's slow daphnia reproduction greatly and temps in the 90's can kill many varieties of daphnia. For breeding, a temperature of around 76 degrees F is good. Diurnal temperature changes seem to be beneficial to daphnia reproduction.

When food is abundant only female daphnia are produced. Females can reproduce asexually at about 7 days old and can live for 28 days or more. Each Daphnia female can deliver up to fifteen babies every three days. It is easy to see how daphnia can clear the water of all food very quickly. If food supplies are low then males are produced and they mate with female to produce eggs. These can be seen as large black spots inside the females and are usually produced before a crash. The eggs only hatch after being subjected to low temperatures.

Daphnia is very easy to culture outdoors in "kiddie pools", but with the threat of West Nile virus it is not worth the risk. I culture my daphnia inside the house using two styles. One style is a continuous method where animals are harvested daily and the culture vessel is only cleaned if needed. This method is the easiest, but usually has lower yields. Another style is a batch method where animals are added to a food source and after a given time all animals are harvested and a new culture is started. This method is good for giving a known quantity every time period. Batch methods are also good if you are trying to maintain a pure culture.

My batch method relies on jars of green water to which I add monia. I use monia in the jars because they reproduce faster. I put a 20-gallon stainless tank outside and added two feeder goldfish and instant green water. I use

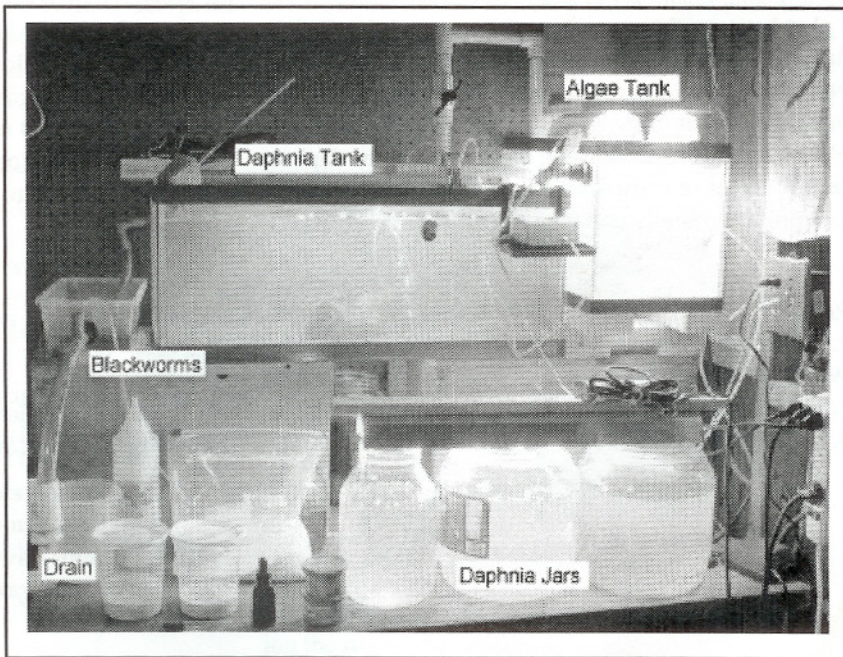
2 1/2-gallon plastic pretzel jars filled with green water from outside. These jars have moderate aeration and add some crushed coral. Add monia and once the culture is growing well (week to 10 days) and there are lots of babies I net out the adults which leaves only baby monia. The baby monia will take a while to grow enough to reproduce which keeps the baby culture stable for a little while. I repeat this cycle using three jars. There are usually one adult jar, one baby jar and one mixed jar. I feed fish from the baby jar and the mixed jar. The adult jar is left alone until it is going strong and then I repeat the cycle. I have found that with jars it is easier to net out the adults than to net out only the babies. The adults help to start the new culture and get it going quickly. I feed the small monia to my baby fish. This system works really well until I get lazy and the cultures die off.

My continuous daphnia setup started by reading an article on monia from the University of Florida posted on The Chesapeake Area Killifish Club site. I have a 70 gallon planted tank upstairs that has an automatic water change system. Three times a day I change about 2 gallons. The water flows downstairs through 3/4" PVC. Half of the water flows in an algae/goldfish tank and the other half flows into the daphnia tank. I think that the large water changes keep the culture healthy.

The algae tank is a 10-gallon with two 55w compact PC lights that run 24hrs a day. The goldfish in the algae tank are heavily fed. Algae and other microscopic bugs thrive in the goldfish waste. This tank also has moderate aeration to keep the algae in suspension. The water from upstairs also keeps the algae in suspension. I also add 1ml of MicroAlgae Grow from Florida Aqua Farms several times a week. This tank has a 1/2-inch bulkhead that drains into the daphnia tank.

The daphnia tank is a 20 gallon long with one 55w compact PC light that runs 24hrs a day. This tank has two airlines with moderate aeration. I have added about 1 cup of crushed coral to keep the pH at about 8.5. I do not have a heater in the tank.

I stir the tank up several times a day to keep the food from settling on the bottom of the tank and to keep the



food suspended in the water column. The daphnia get two one gallon feedings of algae a day from the goldfish tank. I usually feed 1/2 teaspoon of dried milk or small amount of yeast mixture twice a day. I prefer the yeast because I feel that it eats some of the bacteria and other stuff to help keep the tank cleaner. Algae seem to help clear the water in the same way.

Cyclops are one of the main contaminants to a daphnia culture. When they overrun the culture it is best to start over again. Cyclops do not tolerate ammonia well. Daphnia can tolerate some ammonia. If the pH is about 8.5 then the higher levels of un-ionized ammonia seem to keep the cyclops under control. Another contaminant when overfeeding for a long time is the build of filamentous algae. This algae seems to trap the daphnia. I siphon the bottom of the tank if there is any gunk build up to keep the filamentous algae under con-

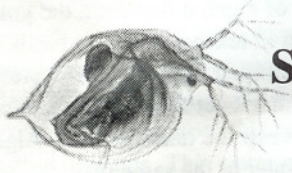
trol. Fungus is also a major problem. I have noticed fungus when I have had a population explosion and have not harvested enough daphnia. The population crashes and the remainder get fungus. If your're lucky you don't have to restart the culture. Continual harvesting and population management seems to keep fungus under control.

I also have ramhorn snails and Amano shrimp in the daphnia tank to help keep it clean. The ramhorn snails breed like crazy. I am hoping that the shrimp will breed, but I hear that they eat their own babies. Some blackworms have established themselves in the daphnia tank. They have a sustaining population but do not seem to reproduce rapidly enough to be practical. I have

found it is easier to buy them at the LFS. The daphnia tank has a 1/2 bulkhead that overflows into my blackworm tub. The worms stay very healthy until they get feed to my Apistos

This culture has been going since Jan. The 20 gal ran for about 3 to 3 1/2 months I over feed and over stock and it crashed. I added daphnia from another culture to restart the 20-gallon tank. It has run for about 3 months and is still going strong. This system produces more daphnia than I can feed my fish or give away. If you have any questions you can email me at rickdotson@aol.com.

- References: Books 1. "Encyclopedia of Live Foods" by Charles O. Masters - published by T.F.H.
2. "Plankton Culture Manual" by Frank H. Hoff & Terry W. Snell - published by Florida Aqua Farms, Inc.
Websites
3. Article on raising monia using the overflow method - http://edis.ifas.ufl.edu/BODY_FA024
4. Article on raising monia using the Jar method - <http://fins.actwin.com/nanf/month.9909/msg00050.html>



Starter Cultures and Supplies

Sachs Aquaculture Systems – sells starter cultures including four types of daphnia- <http://www.aquaculturestore.com/>

Florida Aqua Farms – aquaculture supplies – algae & monia
<http://www.florida-aqua-farms.com/OrderForm/PriceListw.htm>

Another Fishy Weekend

Steve Szabo
photos by author

Not long ago, I wrote about the NEC Weekend Workshop held in Farmington, CT, near Hartford. Recently, I attended the "Nickel City International Tropical Fish Exposition" near Buffalo, NY. The "International" in the title came from the Canadian participants in the weekend and the fact that the Canadian Association of Aquarium Clubs (CAOAC) was holding its annual meeting as part of the weekend.

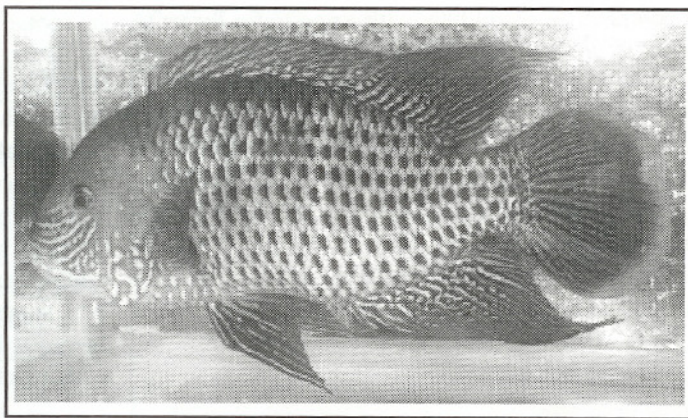
Since I decided rather late in the game to attend this weekend, I was not able to get a room in the hotel where the event was held, and had to settle for a motel room about one and a half miles from the venue. I also chose to drive up, since it was unlikely to get a decent fare on any flight up to that area. The Internet was invaluable in finding both the room and the driving directions. The drive up took me a bit more than 6 hours, traveling about 365 miles over a combination of mostly 2 lane roads interspersed with some good stretches of interstate highway. It was a fairly pleasant drive.

The last time I went to an event in the Buffalo area was many years ago when I attended the Falls Fish Festival in Niagara Falls. This means that, unlike the NEC event, I did not have any history with the event, and nothing to really compare it to, other than events I have attended in other areas. This event also had a show as a part, and the final tally was 198 entries.

Once I had arrived at the motel where I was staying, and stretched out for a bit, I headed over to the site hotel to register and check out what was happening. It was not clear where I should enter the building, as it is more of a meeting and banquet facility than a hotel, so I chose a door and walked in. The first room I found was the Vendor room, already occupied by Ray "Kingfish" Lucas and his display and Mike Schadle with his books and wife Robin. The Niagara Koi folk also had a display. After chatting it up with Kingfish, Mike, and Robin for

a bit, along with some joshing of Kingfish about the distance he had to travel for this event (about 10 minutes), I wandered off to see what I could find and register.

Upon registration, I found that I had tickets for each of the speakers. Upon going into each talk, one would put his/her name on the back of the ticket and, at the end of the session, it was to be used as a draw for a door prize. Didn't win a single one, but it was a nice touch. Also, there was \$2500 worth of fishy bucks that would be used during the weekend, first at a Monte



Carlo Night event and then for various auctions during the rest of the weekend.

After a quick tour of the show room, I went off in search of some dinner before the events began. I had hoped to take advantage of their Hospitality Room, but a meeting held in that room had run over and it was not available, as it turned out, for the evening. I was able to find some fast food near the meeting place and quickly had some food in my stomach.

Dave Franco was the kickoff speaker for the weekend, and while I was waiting for the festivities to begin, I met some of the local people and chatted fish. I was also able to meet some of the people down from Canada. Dave Franco is a local wholesaler and he spoke of a trip he took to Southeast Asia recently, with a transshipper with whom he does business. He was able to give us some insights into the business that supplies us with fish. His trip covered a lot of terri-

tory, from Hong Kong to Thailand, to China, to Japan, to Singapore, and several places in between.

After the talk, a Monte Carlo Night was held, which enabled a few to increase their hoard of Fish Bucks, and also decreased the holdings of a few. It was again also a chance to chat it up with various people.

Things got underway at an early 8 AM start with Tom Ulrich, a local business owner of a garden center specializing in ponds. Naturally, his talk was about ponds. He was followed by Jody Ghianni, who spoke on the genetics of angel fish. The talk was limited to the various colors of the angel fish, with a nod to fin forms. A change in the schedule gave us Jaap Jan DeGreef on collecting fish in various areas of South America.

There was a break for lunch, and pizza, soft drinks and beer were available in the hospitality room at no charge. This again gave one the opportunity to talk with people from various areas about themselves and fish. I got into a rather lengthy discussion of photography with Larry Johnson and a few others who were at the table I sat at



to have my pizza.

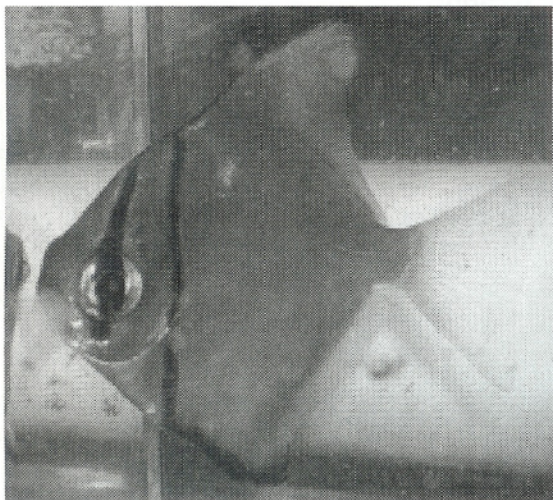
After lunch, we had Ray "Kingfish" Lucas filling in for a no show speaker. He spoke of his trip to South America several years ago. Mike Schadle speaking on livebearers followed him. He gave a decent overview of all types of livebearers and some of the things to look for should you be keeping them. He was allowed to run over as the organizers scrambled to find an LCD or DLT projector for the next speaker. Larry Johnson came up next speaking of his experiences with Stuart Grant and collecting in Lake Tanganyika. Larry ended up doing his presentation on a laptop, with the audience crowding around as he spoke.

There was a break, followed by a cash bar and the banquet, with Paul Speice, the Aquatic Maestro, as the banquet speaker. He gave a rather light-hearted talk, while getting across some important points regarding fish nutrition. Following the talk, the first of the Fishy Buck auctions was held, auctioning off the table centerpieces, which were various varieties of bettas in bowls. There was some spirited bidding, and some people pooled money to be able to meet the bids they were making. An evening of Karaoke followed.

During the breaks in the action on Saturday afternoon, I was able to go into the show room, and tried to take some pictures of the fish in the show. Some even came out. I should explain that I was experimenting with a new digital camera and flash. I found out that I had a lot to learn, though some of the photos came out very well.

Sunday started off with the Awards Breakfast, where the plaques for the winners of the show were presented, along with various awards from CAOAC. After the breakfast, I again had the opportunity to try to improve my technique with the digital camera. The Auction started at noon, but one was able to view the items starting at 10:30 AM. They did have a pretty good selection of lots for their auction. I left the site shortly after noon, after saying the appropriate goodbyes to old and new friends.

The attendance was less than half of what one normally sees at the NEC event, but on par, or a bit larger, than what I have seen at other regional events I have attended.



This weekend was unusual in that they had three events happening during the course of the weekend. They had the Speakers, they had the show, and they had the annual meeting of the CAOAC umbrella organization. All such weekends have the speakers. Some may have a show as well, and some will have the weekend combined with a meeting of another group, but seldom does one see all three events wrapped into one.

It is my opinion that should you see such events advertised, make an attempt to get yourself to one or two of them during the year. The North Jersey Aquarium Society has an event coming up in September, which celebrates their 50th anniversary as a club (see <http://www.njas.net/> for more information), the PVAS has an event scheduled in October with speakers, attend the meetings, watch the "Delta Tale", or visit the web site for more information, and the Raleigh (NC) Aquarium Society has an event coming up in March, check <http://www.fishclubs.com/nc/ras/index.html> for information when it becomes available. And don't forget that the NEC's event is March 19-21, 2004. When information is available, you will find it at <http://northeastcouncil.org/html/> and don't forget references on that site to PVAS refer to the Pioneer Valley Aquarium Society of Arizona

Upcoming Events

American Cichlid Association (ACA)

Thursday, July 24th - Sunday, July 27th 2003

At the Best Western- Springdale in

Cincinnati, Ohio

Presented by: The American Cichlid Association and The Greater Cincinnati Aquarium Society

Speakers to include:

Wayne Leibel, Randall Kohn, Jeff Cardell, Ad Konings, Chris Peterson, Dick Au, Dr. Paul Loiselle, Steve Lundblad, Joe Szelesi, Patrick DeRham

Cichlid Fish Show

Cincinnati Zoo Tour

Newport Aquarium Tour

Guy Jordan Silent Auction

B.I.T.C.H.E.S. Hospitality Party

Huge Cichlid Auction

North Jersey Aquarium Society (NJAS)

presents a "50th Golden Anniversary Weekend", Sept 26 thru 28, at the Four Points Sheraton 21 Kingsbridge Road, Piscataway, NJ 08854

phone: 800-325-3535

Speakers to include:

Alan Levy (Wardleys) Honorary Chairman
Dr. Paul Loiselle, Dr. Tony Orso, Rusty Wessel, Rosario LaCorte, Dr. Leo Buss, Stan Shubel, Pam Chin, Steve White, Pat Donston, Al Brown, Chuck Davis

Two Forums: Breeding Tropical Fish & Feeding Tropical Fish

Three Tropical Fish Shows

Saturday B-B-Q Banquet

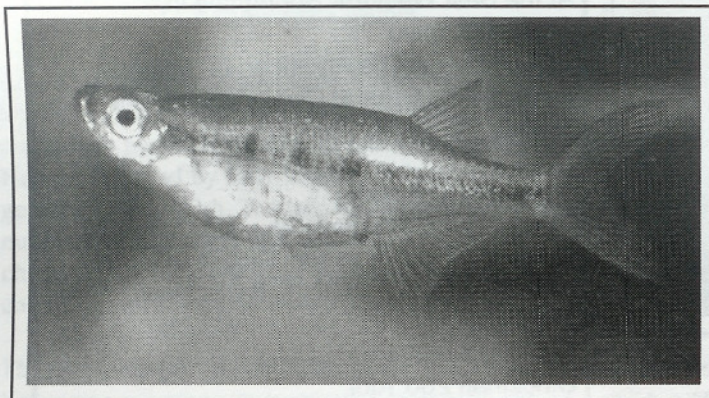
Friday: 3 Different Auctions

Sunday: Giant Fish Auction

Saturday Shopping Trip - entertaining spouses

Chela dadyburjori

Ian Fuller
photos by author



Chela dadyburjori is a delightful little fish that comes from Southeast Asia: Burma, Cochin and Kerala. It is very active and inhabits the upper areas of the aquarium, they are a naturally shoaling fish and are best kept in groups of at least eight or ten. Their brilliant blue spots and central body stripe make them very attractive. Because of their small size, which is no more than forty millimetres total length they should only be kept with fish that are of their own size or have a very peaceful nature. Species like the Danios, and the smaller species of Rasboras such as heteromorphus (Harlequins) or hengeli, neon and Cardinal tetras are very compatible

Being a fairly small species of fish large aquariums are not needed to keep them, a standard 24"x 15"x 12" (15 gallon) aquarium would be ideal. They do however like plenty of security to be at their best. Therefore, a very well planted environment would suit them best; fine leaved plants such as Cabomba, or the grassy looking Sagittarias would do very well. The added cover of an area of Riccia would also give them that little extra sense

of security.

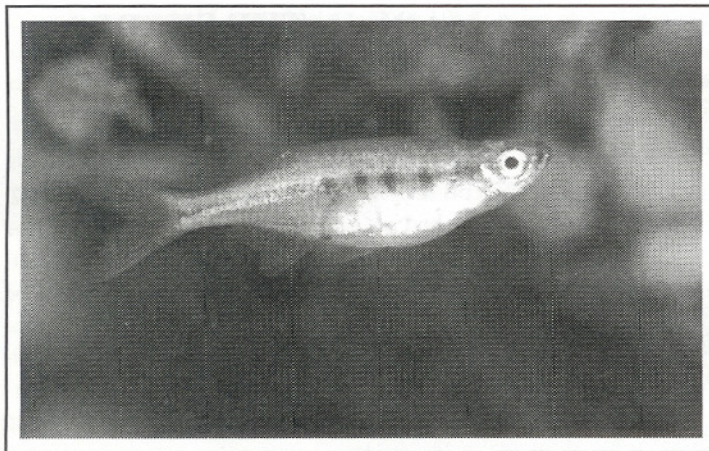
Their feeding requirements are easily accommodated, as they will eat all manner of commercially prepared flake foods provided that the particles are not too large. Occasional feedings of small sized live foods such as newly hatched Brine Shrimp or sifted Daphnia would really enhance their colours and bring them into tiptop condition.

These are a fish that are reasonably easy to breed, but this would need a separate smaller aquarium to make the attempt successful. All that is needed are: - 1. Aquarium approximately 10"x 8"x 8", a 100w heater stat, with the temperature

set at 76-78° F and a piece of course netting that has holes small enough not to let the adult fish swim through.

Place the tank in a reasonably well lit position that will receive some of the early morning sunlight, but not enough for it to affect the temperature of the tank water. Fill the tank to approximately three quarters full using water from the tank that the adult fish are housed in, and drape the netting across the tank and into the water. If the netting can be sewn into a box shape so that it fits just inside the tank then all the better, the net needs to be submerged so that the bottom is about two to three inches below the surface, the sides can be held in place to stop it from moving by using a couple of plastic clothes pins.

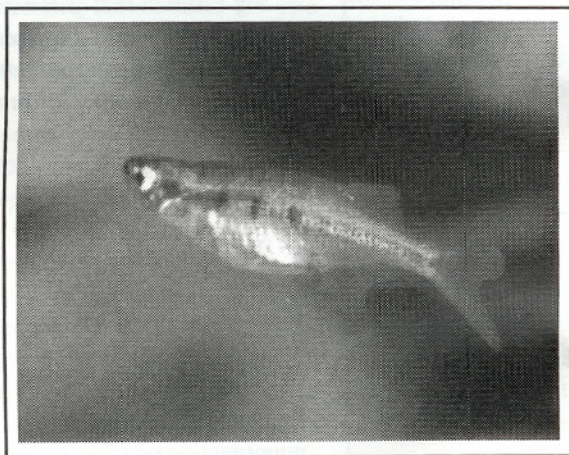
It will be reasonably easy to see when the fish are in breeding condition, as the males will be showing their very best colours and will be pestering the females, who in turn will generally be a little larger and have a more rounded plump appearance. When you decide that the fish look ready to breed, that evening remove equal numbers of males and



females and put them in the smaller spawning tank having first made sure that the water temperature in the spawning tank is the same temperature or a degree or two higher. Once the fish have been put into the spawning tank place a cover over the top to stop any of the fish from jumping out. The cover can be a piece of glass, plastic or another piece of fine netting. The following morning, after about an hour of the early morning sunlight the adult fish should be removed and returned to their original tank. At this point a small air stone should be put into the spawning tank with just enough air coming from it to keep the surface water on the move. Leave the netting in place because the fry, when they hatch, (which is usually within twenty-four hours) will attach themselves to it.

When the fry are free swimming they are almost impossible to see and should be fed with very fine foods such as very dilute Liquifry. This, I have found, is best admin-

istered by mixing six or seven drops in half a pint of aquarium water in a clean jar or bottle. Insert a piece of airline tube into the jar/bottle and keep it in place with an elastic band or a piece of masking tape. On the other end of the tube fit a one way air control valve. Place the jar/bottle on top of the spawning tank so that the control valve is just above the water level, open the valve a little at a time until a droplet forms and drops into the tank about every five minutes or so. The time between drops is relatively unimportant but if it can be regulated so that the contents of the jar/bottle lasts for most of the day it will mean that the fry have a constant supply of food all day. The most important thing to do next is to change a little water every day. This should be at least equal to the amount of feed water that has been put in. The use of small bore siphon is best and the water should be removed from the bottom of the tank as this is where all the waste matter will accumulate. Whereas the fry will almost certainly be up near the surface or hanging on the sides of the netting. After the first few days the fry will start to grow quite rapidly and will be seen as tiny little black splinters.



By the time the fry are a week old they should be able to take very fine powdered flake food of which there are several good brands on the market. Small amounts of micro worm are also a good food at this stage of growth, but just enough for them to eat in a few seconds, because whatever they miss will fall to the bottom and help

Breeders Award Program

John Mangan

Current Standings

<i>PVAS Member</i>	<i>Points</i>	<i>Award Level</i>
<i>Don Kinyon</i>	<i>1155</i>	<i>Master</i>
<i>Gerry Hoffman</i>	<i>945</i>	<i>Master</i>
<i>Lorne Williams</i>	<i>500</i>	<i>Master</i>
<i>Francine Bethea</i>	<i>345</i>	<i>Advanced</i>
<i>Gene Moy</i>	<i>305</i>	<i>Advanced</i>
<i>John Mangan</i>	<i>185</i>	<i>Intermediate</i>
<i>David Snell</i>	<i>185</i>	<i>Intermediate</i>
<i>Dov Goldstein</i>	<i>165</i>	<i>Intermediate</i>
<i>Shane Linder</i>	<i>85</i>	<i>Breeder</i>
<i>Nancy Johnson</i>	<i>55</i>	<i>Breeder</i>
<i>Michael Kaiser</i>	<i>15</i>	
<i>Kelly Kinyon</i>	<i>10</i>	

Please contact John Mangan to volunteer to be a Checker. Even if there is someone already listed for your area we could always use someone else to help spread the work around.

MADE IN THE SHADE

Wild Aphyosemion Riggensbachi Dibeng Gold

Rodney Conway

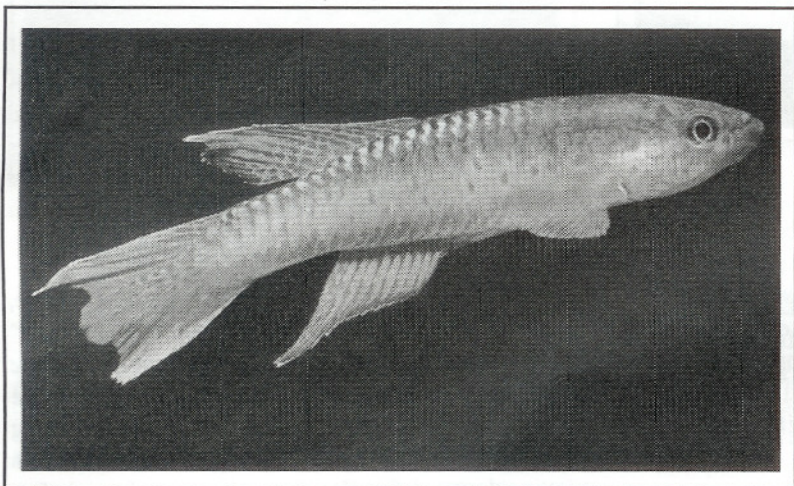
I have been keeping killifish since October of 2002. Oh sure, it had all started innocently enough at the Potomac Valley Aquarium Society's Fall Fish Festival. As part of the show 5.5-gallon tanks could be purchased for two dollars and a foam filter could also be had for an additional two dollars. So for four dollars anyone could acquire a setup that would be perfect for a one species killifish tank. So I invested in four tanks and filters. I was able to start two of the tanks after the auction that accompanied the Fall Fish Festival thanks to the available killifish. I kept the remaining two setups on stand by for any other killifish that caught my eye.

In January of 2003, I joined the Chesapeake Area Killifish Club (CAKC). As part of the monthly meeting a mini auction takes place that usually contains killifish, plants, and equipment. However, for the January meeting CAKC imported a box of wild killifish to provide additional items for the January mini auction. My interest peaked because up until this point I had not kept any wild killifish.

One important thing I have learned when keeping killifish is it always good to purchase more than one pair of any killifish that you want to keep. This helps in case one member of the group decides to jump to freedom or does not survive introduction to a new home. Looking at the available items in the January mini auction, I noted that there were two bags of interest. Each contained one pair of wild imported Aphyosemion Riggensbachi Dibeng Gold killifish. Another important thing is to make sure that you have empty tanks ready to house the new purchases. Luckily, I still had two tanks from the Fall Fish Festival and one would definitely be a great home for the riggensbachi killifish. The most important thing to remember when buying fish is to make sure you have enough cash on hand to purchase the desired killifish. I checked with my accountant (i.e. wallet) and determined that I might have just enough denero to get the riggensbachi's. So as the

auction proceeded I was able to acquire both pairs and still have a small amount of money left over for the accountant.

The reason I purchased four sets of 5.5-gallon tanks at the Fall Fish Festival is that they fit nicely on the bottom portion of a metal stand in my fish room. A 30-gallon



tank that holds two egg phoenix goldfish occupies the upper portion of the stand. I have installed a bracket on the stand and mounted a fluorescent strip light just below the bottom of the top tank. This provides more than adequate lighting for all four tanks on the bottom shelf and the light is out of the way for feedings and tank maintenance. The other additions to these tanks are two spawning mops (one floating and one non-floating). This has worked well for the other killifish I have kept in the past.

However, this was my first time working with wild imported killifish. So after placing the ruggenbachi into the tank the first thing I noticed was that the fish were extremely shy when compared to my other killifish. Only one of the four would come out from the cover provided by the filter and spawning mops to check out the surroundings. The second thing I noticed was that the fish were not eating any of the frozen bloodworms that were placed into the tank. In order to get them to eat, some live black worms were added to the tank and the killifish began eating them immediately. Over the next week

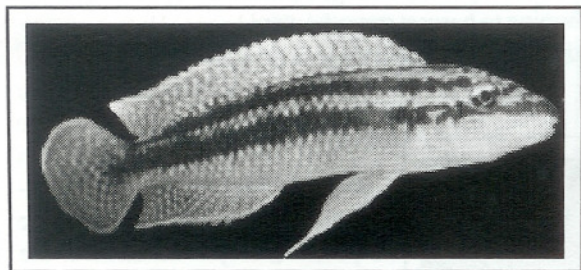
I began mixing in the frozen bloodworms with the live black worms. This helped the ruggenbachi recognize that the frozen bloodworms were also a source of food. Since they were eating, I pulled the spawning mops hoping to harvest some fertilized eggs. Unfortunately, there were no eggs present. So I placed the mops back in the tank and hoped for better luck in the next week. During the second week I was able to switch the main food supply over to frozen bloodworms. I pulled the spawning mops at the end of the second week but again there were no eggs present.

So I began to wonder what could be done differently to start the ruggenbachi breeding. I reviewed information concerning these fish available on the Internet and could not determine any obvious flaw with the *setup or feeding*. As I was looking at the various pieces of information, I noticed that the pho-

tos of them all contained a similar pattern. Each of the photos showed that the fish were staying in an area of the tank that was fully shaded from the light source. I decided to take a chance and cut a piece of black foam-board to place over a portion of the glass canopy of the tank. The piece was roughly large enough to provide shade to half of the tank. I also placed foam board pieces to cover three sides of the tank to provide additional shade and privacy. After the foam-board had been in place for one week, I pulled the spawning mops and they held fifteen eggs. Luckily all the eggs were fertile and after a water incubation time of approximately three weeks all have hatched out.

Julidochromis dickfeldi

Gene Moy



A number of *Julidochromis*, or Julies come from Lake Tanganyika in East Africa. Julies are slender torpedo shaped fish. A number of Julies have similar patterns. At a recent club meeting, I picked up several *Julidochromis* from the monthly auction. Having kept *J. malieri* and *J. transcriptus*, I decided to try my hand at the *J. dickfeldi*. I ended up with a pair of *J. dickfeldi*, one *J. regani*, and one *J. transcriptus*.

J. dickfeldi are slender fish with a base of white and three horizontal black stripes. The main stripe goes from the mouth through the mid-section of the body to the base of the tail. Another slightly thinner stripe is just above the main stripe going from the forehead through the eye to the base of the tail. The third stripe, thinner still, runs just below the dorsal fin and along the top edge of the body. The dorsal and caudal fins have a speckled pattern with a hint of blue, especially in mature males.

Although it is not advisable to keep different Julies in the same tank, the group of four went into a 29-gallon tank with pieces of shale and quartz. I add about one half cup of kosher salt and a couple tablespoons of Epsom salts to the water. The Julies were kept with juvenile *Pseudocrenilabrus philander philander*, the Southern mouthbreeder.

The group of fish was congenial for the first few weeks. That is, there was little to no fighting. A few weeks later, as the fish settled in, the two *J. dickfeldi* started show signs of pairing up. The smaller fish was almost

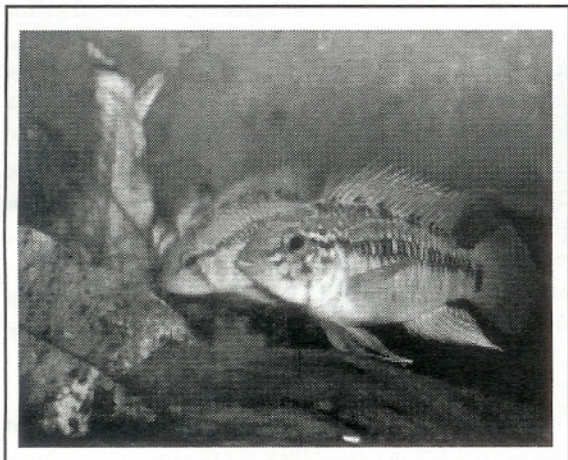
always hiding in the rockwork, while the larger fish often chased other fish away. To add to the confusion, the *Ps. philander philander* started to mature. The dominant male Southern mouthbreeder began displaying to the others. He was able to entice a couple of the young females into spawning. Needless to say, I ended up loosing the *J. transcriptus* and one of the Southern mouthbreeders.

About two months after acquiring the *J. dickfeldi*, I glimpsed a couple of tiny 0.2" fry darting in and out of a crack, and this time I was able to see the newly hatched young in a tight group within the rocks. A few weeks later, I could only see a few young. I decided remove some of the other fish. I removed the Southern mouthbreeders to another tank, and sold off the *J. regani*.

I believe the smaller fish; at about 1.5" was the female, while the larger fish defending the territory, at about 2.0" was the male. I cannot be sure, as I did not witness the actual spawning. I have seen the eggs adhering to the underside of a piece of shale. Upon hatching, the young are stuck to the rock by their heads, so that their tails are pointing down. A few days later, the young become free swimming. Well, they kind of scoot about on the rocks.

After keeping these Julies for six months, I figure that they have had four spawns. There are four different sizes of young. Julies like other Tanganyikan cichlids form a family group consisting of the parents, older offspring along with the youngest offspring. The older siblings help the parents defend the territory. The oldest offspring are 0.7" long, while the youngest are 0.2" long. I feed the youngster "mini-pearls" and ground up flakes.

I've found that Julies easy to keep, and with a bit of care will breed. It is best to keep single species of Julies in a tank. I have kept other Tanganyikan species with Julies with some success. A 20-gallon with gravel and rockwork is preferred. The adult fish like to move gravel and excavate underneath the rock. Be careful on how the rocks are stacked as the gravel movement could undermine the rocks. Keep the tank well filtered and perform regular water changes, and you too will be rewarded with a colony of Julies in short order.



Apistogramma macmasteri

Francine Bethea

On one of those cold and dreary days in December, with nothing else to do, or at least, anything I wanted to do, I decided to do a little shopping at one of the major aquarium stores. It was early in the day so the fish aisles would not be crowded with extended families and whining kids in strollers. (One of these days I am going to initiate a campaign to petition the ban of strollers from fish stores.) The peace of the early day also allows me to leisurely walk the aisles, inspect each tank, and to chat with the employees who are friendlier and more helpful during this time. My focus is unfettered from the never-ending search for those hard to come by species on my perpetually growing fish wish list. Without being annoyed I get a chance to look for the species *Apistogramma* and any that may have come in as contaminants missed by an employee; fat chance of that happening though. The only possible hope would be that there would be a tankful of apistos mislabeled with a 'low' to 'reasonable' price attached.

Anyhow, I came upon a tank labeled *Apistogramma macmasteri*. At first glance, it was difficult to discern if these fish were indeed *macmasteri* as I had only a vague recollection of what the species actually looked like even with my intense interest in the species. I did remember that this is one of the few that sported red

coloring that would intensify as the fish developed.

There is another similar and brightly colored species of apisto, *Ap. viejta* that is a dead ringer for the *macmasteri*. Some say that one is a geographical variant of the other or vice-versa and that one or the other shouldn't be classified as a separate species. But it has generally been accepted in the circle of apisto keepers that these fish are two separate species. Both fish are found in Colombia South America and in adjacent drainage areas in Venezuela of the Orinoco River. Their habitats are shallow bodies of water inundated with driftwood and amassed with vegetation over a sandy substrate. The clear water parameters are soft and acidic with a pH range of 5.5 to 6.0 with total hardness less than 1 degree.

In general, a *macmasteri* male has the typical brown/yellow gray undertones on its body with an iridescent sheen of blue or green. It displays a dappled pattern of red spots on top of its head from the eye and all along their back above the lateral line. Whenever the mood strikes, their black markings show under all that brilliance. The effect is quite kaleidoscopic. Their gill plates show a bright blue gleam under a smattering of additional spots of red. The dorsal is quite high and spiked in the front and long and pointed in the back. The dorsal is adorned with a red border that will intensify with age. The caudal fin is intensely red along the top and bottom edges with orange in between and will become lyre shaped as the fish matures. The extremely high dorsal of the *macmasteri* will distinguish it from the *viejta* once mature. However, none of that had any bearing on the facts to facilitate if the label on the tank was correct because the fish were juveniles. It would have to be sufficient to rely upon the label, take the fish home, and grow them out to delineate their true identity.

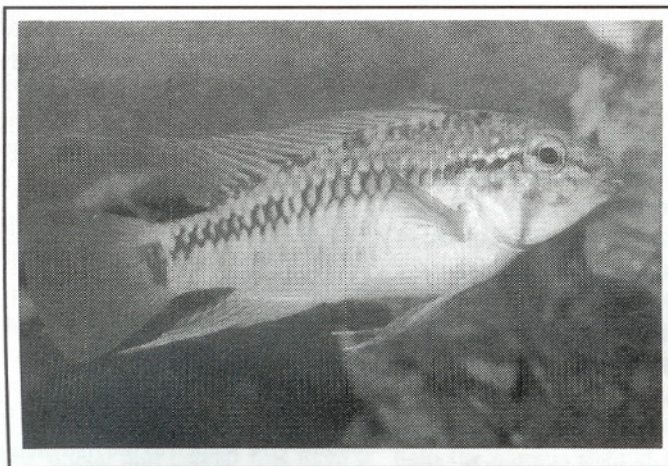
I then turned my attention to choosing a pair. My usual technique of ensuring that I would have both sexes of any species involved the purchase of at least six to raise the odds. Using this method was out of the question in this situation, largely in part due to the \$35 price tag. But since I had the time to spare, I unhurriedly scrutinized each fish for the telltale signs

that would unlock the mystery of their gender.

Both sexes have an orange tint to all of the fins. The males, usually larger and more colorful would be easier to spot. These specimens were just beginning to show some of the red color, but not enough to be certain. I would have to let them tell me who was who. Fortunately there was one fish, redder than the others, which had staked out a territory above a piece of driftwood behaving in typical cichlid fashion, convincing me that it was a male.

The female would be more of a challenge because the male that had secured a territory in the tank forced the other males to take on subservient behavior and coloring mimicking the females. (More popularly known as 'sneaker males'). Furthermore, what can be difficult about sexing juveniles of *macmasteri* is that the females carry the orange color in their fins also. Juvenile females of *macmasteri* usually show their ventral markings

once in breeding condition. Apisto females, more often than not, have black markings in their ventral fins that are very prominent even at the fry stage. Even then, any apisto female when not in the most ideal of conditions, those telltale distinctions would be difficult to see at best. Since there were no markings in the ventral fins to go by, the next determining factor would have to be the dorsal fin. Again, generally most Apisto females' first two or three spines of the dorsal are blunt and black. Therefore, I concentrated on that area of the other fish for a sign. With choices made, I left the store not quite sure if the fish I had chosen were indeed a pair.



Once home, I placed the pair in a bare-bottom 20 gallon long. There were a few oak leaves, a little java moss and *Cladophora* balls scattered about. I placed a piece of terra cotta from a 3" flowerpot back in the corner. A sponge filter handled the filtration. The aeration level was set just high enough to keep the mat of duckweed from closing and encompassing the surface entirely. The lighting was one 20-watt fluorescent tube; its luminance barely penetrating the duckweed. The temperature of the water fluctuated between 78 and 80 degrees. The pH of 5.5 was achieved by mixing rainwater and tap water. The total dissolved solids' reading was 17ppm.

Primarily I fed the two fish a copious amount of blackworms. On occasion they got the frozen type but it wasn't as readily accepted as the live food. In a matter of a week the fish responded to this feeding regime and colored up nicely. It became evident that I had a pair. The two of them began courting behavior. There was a lot of tilting of their bodies and flaring of the fins. The female took on a deep orange color with a white patch at her throat in front of her ventral fins. Soon her appearances were reduced to showing up to be fed.

Eventually, when the female reappeared about 7 days later, she was amongst a clutch of about 70 free-swimming fry. Through research I found out that this species is capable of producing 200 hundred fry. I am relieved that didn't happen. The female swam in the cloud of fry guiding them slowly around the tank. Her behavior became quite attentive and would only hesitantly leave them to be fed. The fry darted amongst the mulm and debris around the algae balls. The female would hover, fully alert, above them as they foraged. The male was kept at bay with her frontal attacks. She would slowly approach the male with head down and fully extended fins. In a flash she would zoom in and hit driving him to



the far corners of the tank. He conceded defeat and was resigned to living under the sponge filter for shelter. I became distrustful of the male and decided not to wait to divide the tank. There were a few fry that were caught on the side with the male. I left them with him realizing that he was also attentive to their needs. At this point, I began to feed the fry baby brine shrimp to supplement their diet. As time went by, I noticed that the fry trapped with the male grew faster than those with the female. Probably had a lot to do with less competition at feeding time.

A month later the female began chasing the fry. Her color was intense and soon there were about 30 crimson eggs attach to the partition. Both fish were busy chasing the fry from each territory. Subsequently, the female ate the eggs. At this point, I removed the pair to another tank and removed the partition in the original tank to allow the fry more space.

In conclusion, I found *Apistogramma macmasteri* an enjoyable and easy species to keep. This species will grow to be a personable, stunning fish that is easy to spawn. If you see a them at a local aquarium shop or a bag of them at an auction make sure you get a pair for yourself.

All photos by author

Notice

All articles and BAP
Reports are due by
October 15th.



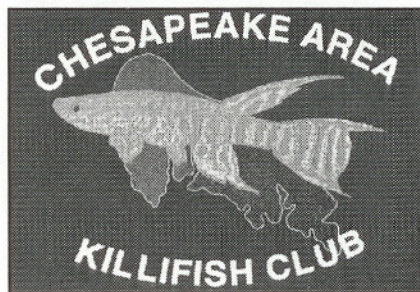
The next issue of The Delta Tale
will be published in November to
cover the Fall Fish Festival results.

Outside PVAS



Capital Cichlid Association

www.capitalcichlids.org



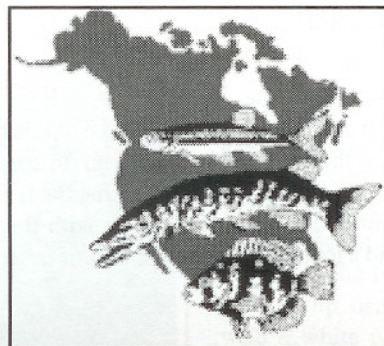
Chesapeake Area Killifish Club

www.chesapeakekillifish.com



Greater Washington Aquatic Plant Association

www.gwapa.org



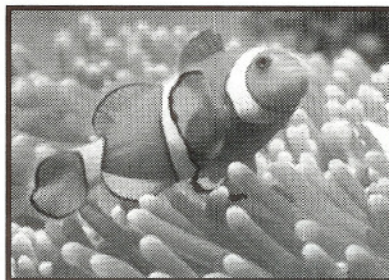
North American Native Fishes Association

www.nanfa.org



Mid-Atlantic Koi Club

www.makc.com



Washington Area Marine Aquarium Society

www.wamas.org



PVAS Membership

Potomac Valley Aquarium Society, Inc

PO Box 664

Merrifield, VA 22116

Membership dues for PVAS are:

Category	Yearly Fee
Family	\$20
Individual	\$12
Corresponding	\$9
Junior (under 18)	\$5

Date: _____

Name: _____
(Please print clearly)

Street: _____

City: _____ State: _____ Zip: _____

Phone: (_____) _____ - _____

e-mail address: _____
(Please print clearly)

Occupation: _____

Where did you hear about PVAS/get this application? _____

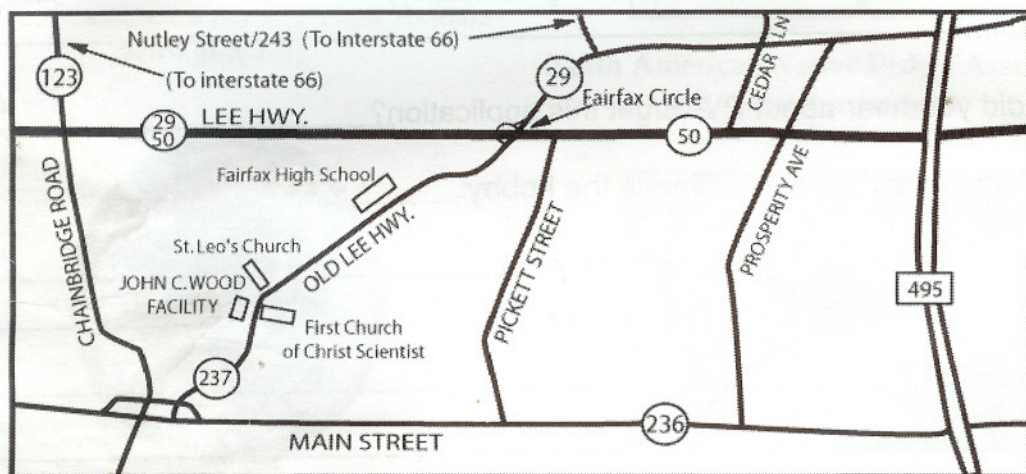
No. of Aquariums: _____ Time in the hobby: _____

Special interests: (e.g. catfish, cichlids, etc.) _____

Reason for joining: _____

Renewals are due in January. At other times of the year, dues are prorated.

Potomac Valley Aquarium Society
P.O. Box 664
Merrifield, VA 22116-0664



Meetings are held at the John C. Wood Facility, 3730 Old Lee Highway (Route 237), Fairfax City, VA. We meet in Room 6, which is located behind the Police Station. Doors open at 7:30 and the meetings start at 8:00 p.m. ---EVERYONE IS WELCOME!