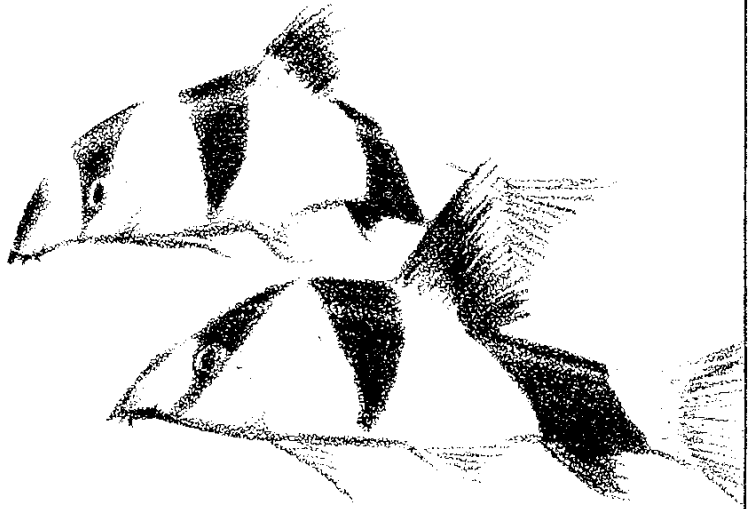


DELTA TALE

Official Publication of the Potomac Valley Aquarium Society

Volume 28 • Number 1

January/February 1997



The *Delta Tale* is published bimonthly 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 purposes of furthering the aquarium hobby by the dissemination of information and advice, and the promotion of good fellowship among the membership by organized activities and competitions.

All correspondence to the society and to *Delta Tale* should be directed to P.O. Box 664, Merrifield, VA 22116.

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All materials for inclusion in *Delta Tale* must reach the editor by the 10th of even numbered months (Feb.,April, etc.).

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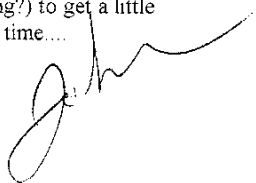
As we begin a new year I'd like to take a minute to thank everyone that helped make last year a successful one for PVAS: officers, committee chairs, speakers, auctioneers, bowl show and BAP participants, authors, and everyone that helped out with all of the many, many "thankless" jobs from auction paperwork to stacking chairs. We couldn't have done it without you. You **are** PVAS. Keep up the good work and let's make this year even better.

We're beginning the new year with a few changes. The cover of *Delta Tale* has gotten its first facelift in a looong time thanks to the efforts of PVAS member Christopher Wright. Let us know what you think. As the year goes by we'll try to make some other improvements also (suggestions are always welcome), including getting back onto a more regular publishing schedule. I've gotten fairly well settled into my other editor job, ALA's bulletin *Livebearers*, and won't be having to spend quite as much time on each issue of that now that I know, more or less, what I'm doing and how best to do it.

The Raleigh Aquarium Society will be holding their Workshop & Auction weekend on Feb. 28 thru March 2. If you've never been to one of their functions I'd highly recommend going. They always have a great lineup of speakers and a good auction, not to mention tons of raffle prizes. I know it's tons because Brian and Wendy Tramm usually make me help carry it all in to pay for my room and board. Well, that's not entirely true. I could have mowed the lawn and washed the cars instead. (Just kidding. But now Wendy will feel guilty and won't let me carry anything.) I'll have more information elsewhere in this issue and there will be flyers with complete info., directions, etc., available at the Feb. PVAS meeting. See me if you want one.

I'll have to end this time on a sad note- PVAS member George White was caught keeping cichlids again, which is a violation of his parole. This time the State Department has gotten tough with him and he has been deported to Australia (I didn't know it was still a penal colony. I guess I need to keep up with the news better). Since Australia has no native cichlids hopefully George can be truly reformed this time by exposure to Rainbows and other fish that can be discussed in polite company. Until that time let his story be a lesson to all of you parents out there not to let your children fall in with the wrong crowd. They may start out innocently enough with a few angelfish but before you know it they'll be wanting mbuna. It may be too late for George, but your child can still be saved before he or she (yes it can happen to girls too) becomes a cichlidophile. I apologize for using a word like that in a family magazine but sometimes it's necessary. Mark over it with a black marking pen before letting your children read this.

I've been up since 1:30 this morning and my brains starting (starting?) to get a little scrambled, as you may have noticed, so that's it for now. Until next time....



THE STATE OF THE CLUB - 1997

Pete Thrift

January has become the month to assess the state of things - unions, states, cities, and so on. As PVAS president for 1997, I would like to give my assessment of the state of our club - its health, strengths, weaknesses.


The club's overall health is very good. We have had the enormous benefit of three years of outstanding leadership from Alex Townsend. During his tenure as president, Alex was the source for most of the monthly programs and all of the monthly refreshments. He was solely responsible for successfully reviving the monthly bowl show, worked hard on the past three workshop weekends, and has stepped in as an untiring auctioneer. And perhaps most importantly of all, Alex was (and still is) a genial and quietly impressive spokesman for our club and the aquarium hobby to our membership, sister aquarium clubs, various speciality societies, local businesses, and to the general public. Due to his strong desire to see PVAS grow and prosper, Alex has served an unprecedented three consecutive years as president. We all truly owe him a tremendous debt of gratitude.

The club's financial health has never been better. Our weekend auctions are the primary source of PVAS operating funds, and they have consistently been very popular and profitable. The club's excellent financial health has been responsible for free workshop weekends and holiday dinners, club-subsidized bus trips to That Fish Place, and membership dues which have not been increased in at least 15 years. The fact that we *know* that the club's finances are in good shape is due solely to the hard work of Rich Blumberg and Dave Snell, treasurers extraordinary. Their bookkeeping and comptroller skills kept the board on the fiscal straight-and-narrow, and got your auction proceeds to you quickly and accurately.

Organizationally, PVAS is also in good shape. Meeting attendance has been good, with a number of new folks visiting and deciding to join us. We have been able to stage several outstanding weekend workshops, with talks by nationally-recognized experts and authors. John Mangan has been able to continue to publish a high-quality *Delta Tale*, and there has been a recent flurry of original articles. John has also been able to revive the Breeder's Award Program. And thanks to Dave Snell, PVAS now has its own extensive and professional-looking Internet home page!

The club's only weakness is its continuing operational reliance on the same people year after year. To paraphrase somebody - I'm not sure I want to belong to a club that would have me as president (again!). New board members Barbara and Lorne are a good start, but more is needed! Please get actively involved - the monthly raffles and refreshments are two good jobs to start with. Please see me or any board member at our next meeting, or call me in the evenings at 703 971-0594.

WHAT'S HAPPENING!

 For up to the minute information on what's happening call the free PVAS hotline anytime. (703) 352-3365

Feb. 10: PVAS Monthly Meeting: Program/Speaker, bowl show, raffle, door prize, refreshments, mini-auction, etc. etc.

Feb. 17: President's Day. Does that mean we have to buy presents for Pete?

Feb. 28 - March 2: Raleigh Aquarium Society workshop and auction. Details elsewhere in this issue. Flyers available at the Feb. PVAS meeting, or contact John Mangan

March 10: PVAS Monthly meeting. Program, bowl show, raffle, door prize, refreshments, mini-auction, and more.

April 25 - 27: American Livebearer Association convention. This year's convention will be held in Erie, PA. For more info contact Bob Cashin, 3012 Mckee Rd., Erie, PA 16506 or e-mail rcashin@juno.com; or see John Mangan (I hope to have some flyers soon).

TRADING POST

PVAS members may advertise in the trading post at no charge. Send ads to *Delta Tale*, c/o John Mangan, 12633, Oakwood Dr. Woodbridge, VA 22192.

Wanted: Grindal Worm Culture. Must be free of mites or other contaminants

For Sale: backissue aquarium magazines. Many different titles. Send SASE for catalog.

For Sale: 4 adult *Neolamprologus cylindricus*. \$50/group.

John Mangan, 12633 Oakwood Dr., Woodbridge, VA 22192.

Industry Supporters of PVAS

Pete Thrift

Ever wonder where the club gets all the hobby equipment and supplies that are given away as prizes, auctioned off, or raffled off? Some things are purchased by PVAS, such as tanks, but most of the goods are received as donations from various hobby manufacturers. Before the October weekend workshop, approximately forty letters were sent out to most of the major companies producing fishkeeping products soliciting their support of our club and the fishkeeping hobby in the greater Washington area. The following companies responded with donations:

Aquarian Flake Foods	Mardel Laboratories
Aquarium Products	Marineland Aquarium Products
Aquarium Systems	Nippon Foods/Ocean Nutrition
Aquarium Technology	O.S.I. Marine Labs
<u>Cichlid News</u> Magazine	Penn Plax Plastics
Coralife/Energy Savers	Rainbow Plastics - Filter Division
Feller Stone	San Francisco Bay Brand
<u>Freshwater and Marine Aquarium</u> Magazine	Tetra/Second nature
Hagen USA	T.F.H. Publications
Hawaiian Marine/Ehiem Products	That Fish Place
Hikari USA	Wardleys
Kordon/Novalek	

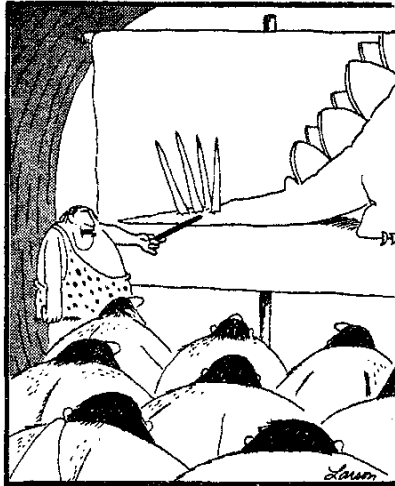
About half of the above donated through the services of Ray Lucas and his Kingfish Services; the rest donated directly to the club. These donations generate several thousand dollars of income to the club, enabling us to stage free activities such as the recent workshop and the holiday party. Several of these companies donated products worth several hundred dollars. This is remarkably generous when you consider that these companies receive more than 250 donation requests each year from aquarium clubs and speciality societies.

These companies obviously believe in the value of the organized hobby. They support us - shouldn't we support them?

Carolina Aquarium Workshop XIII

The Raleigh Aquarium Society will be holding their annual workshop and auction the weekend of February 29 - March 2 1997. Featured speakers will be David Herlong, African Cichlids; Gerry Hoffman, Dwarf Cichlids (what a coincidence, we used to have a guy in PVAS named Gerry Hoffman, I wonder what ever happened to him. Rumor is that he was working in his yard one day and was attacked and dragged off by a pack of rabid chipmunks. But that's only a rumor); Gene Lucas, Bettas & Fishes of Indonesia; Ray Lucas, Freshwater Fishkeeping; Keith Pyontek (from Rare Fins), New and Unusual Fishes; Karen Randall, Planted Aquariums; Dana Riddle, Reef Tank Lighting & Beginning Reefs; Joseph Yaiullo, Successful Reefkeeping. There will also be a native fish field trip Friday morning, a banquet Saturday night (speaker Gene Lucas), and auction Sunday. Events will be held at the Crabtree Holiday Inn, 4100 Glenwood Ave., Raleigh, NC.

Flyers with complete info will be available at the Feb. PVAS meeting, or contact John Mangan. PVAS members have been going down to this event for many years and have always come back with good things to say about it. I've gone myself the past 4 or 5 years and highly recommend it. Hope to see you there.



"Now this end is called the thagomizer . . . after the late Thag Simmons."

Babysitting Mbuna

BY SERGE WHITE, FWAAS

The special magic of mouth-brooding Cichlids, such as the colorful mbuna of Lake Malawi, make them one of the most exciting fish to keep in an aquarium. In almost all cases, the mother Cichlid picks up the large eggs in her mouth during the spawning sequence. She will hold them for up to three weeks in her mouth (hatching time depends on the temperature), constantly moving them around. The motion in the mother's mouth keeps the eggs clean, well aerated and from compressing the delicate yolk sack.

When the mother releases the young from her mouth, they are usually so well developed that they look like miniature copies of their parents. Importantly, the fry are large enough and alert enough to ensure that an adequate number of them avoid predators that the species survives. This is an effective breeding strategy for fish in lakes where crowded conditions would make eggs very vulnerable but where the mothers can usually swim away from threats.

Unfortunately, in the home Cichlid aquarium, a mother with a mouthful usually becomes a target for some of her tankmates and lacks a safe place to flee to. Most Cichlid fans wait a few days before moving a carrying mother to a separate nursery tank to allow her to calm down. This strategy works 99 % of the time. When it does fail, however, it is almost always with the very valuable Cichlids you have been trying to get to spawn for ages.

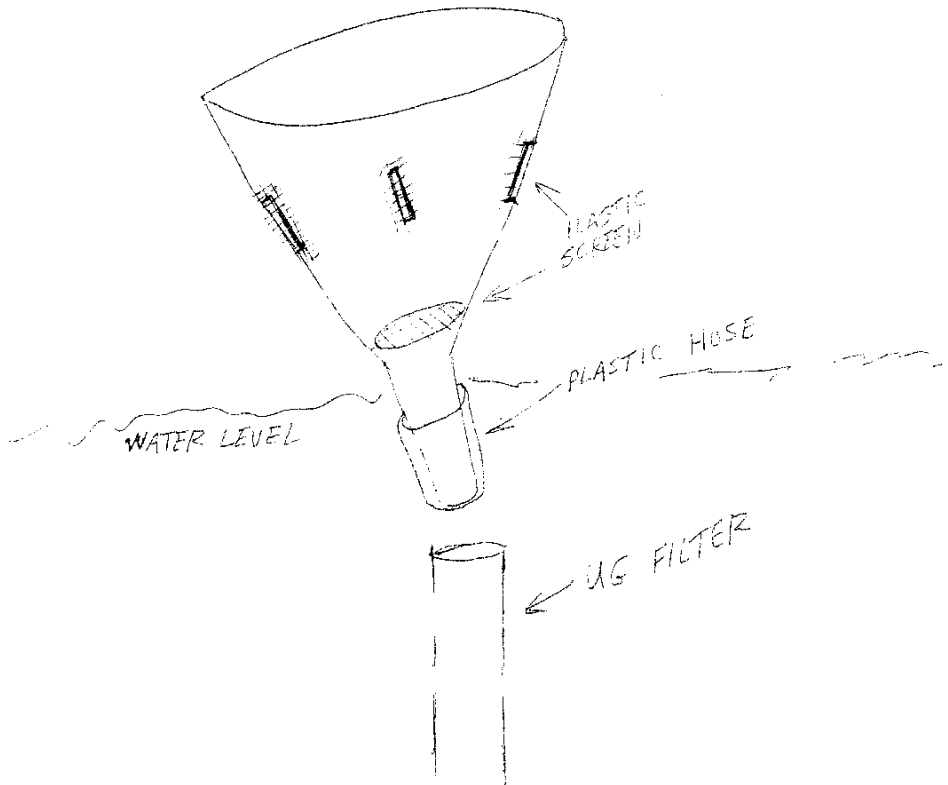
If you do not have a system for artificially "mouthing" the eggs, they will all perish. The eggs' own weight will flatten them out, cutting off their circulation. Putting the eggs in a net and suspending it over an airstone has never worked well for me. Usually, I only get a few eggs to hatch and a few fry to survive. Incidentally, once the eggs hatch, it is important that the fry continue to be well aerated until they absorb their large yolk sacs.

One clever device that I have seen various versions of and which works well as an artificial mother's mouth is made by attaching a medium-sized funnel to the outlet of an undergravel filter. (This is the only thing I use undergravel filters for.) This is easy to make and the materials are not expensive.

You take a medium-sized plastic funnel (one that holds about 12 to 16 ounces) and make 4 or 5 slots in the sides, about 2/3 of the way up from the stem. The slots can either be cut with a hobby crafter's knife or a hot screwdriver heated on the kitchen stove.

It is important that air and water circulate in the funnel without floating the eggs out. Cut some mosquito screen into a circle about the size of a quarter or Susan B. Anthony dollar and into small rectangles. The circle should be glued to the inside of the funnel to cover the hole in the stem and the rectangles over the slots in the side of the funnel. Aquarium sealant works fine as a glue. Then get a small piece of soft plastic hose from an aquarium store or a hardware store. Push this over the end of the funnel which will be slightly slanted. This will make it like a cork so it can be firmly inserted into the undergravel filter outlet stem.

Remember to adjust the flow of air so the eggs, and later the fry, are gently circulated. Good luck.



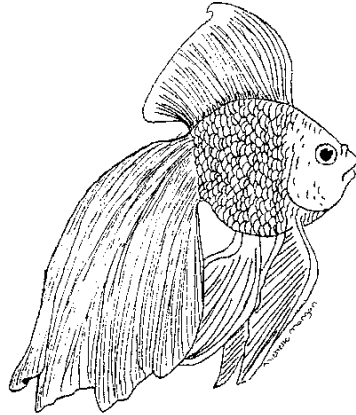
Looking Through The Glass

By Chuck Davis

I looked at my goldfish in a different way,
For reasons unknown, he looked back that day
When he looks out, as I'm staring in,
Is he thinking, "can that thing swim?"
I often wonder is he happy or is he sad?
Would he, if I turned him loose, be glad?

A bowl is a small world to be of any concern.
Still, it's all he's got, I've come to learn.
True, it's all his, no bills to pay,
No real work to do, just swim and play.
I was sad for him a minute or two ago,
Now I think he knows something I don't know.

Does he have a face to express his mood?
Can he signal me when he wants food?
If he swims away is he mad at me,
Or has he grown tired of the scenery.
When his fins are up and his tail a waggin'
Is he happy to see me, or just keeping from gagging.



WATERWORKS

Christopher Wright & Friends

This article will begin a series of articles that will, hopefully, address environmental factors (water & light!) in the freshwater aquarium and serve as a clearinghouse for information on this critical subject. To be effective (and successful) it will rely on your input and response. Read on...

LET US NOW ENDEAVOR TO UNDERTAKE THE MYSTERY OF GOOD FRESHWATER FISHKEEPING—OPTIMAL WATER QUALITY!

I've kept tropicals for some twenty years and have several times given up on growing live plants—too much algae and too many dead plants. A year ago, my interest in the hobby was renewed and I became determined to grow my own little aquatic gardens. I didn't expect to have a Dutch[†] tank or become the next Takashi Amano^{††}, but I was determined to grow a reasonable amount of plants successfully.

Subsequently, I have been sorting through the myriad of information (and misinformation) that is available with hopes of discovering the secrets of maintaining water that is stable, close to neutral pH, conducive to good plant health and, most difficult of all, *low in algae*.

In this "search" I have read *anything* that even mentions in passing a cure for algae. You can imagine...literally dozens of articles from four different periodicals, another dozen books written by experts, ad infinitum and ad nauseum. If I seem cynical, it is rightfully so. These "experts" often contradict each other and virtually *none ever* truly cover the entire subject; information is often woefully incomplete and there are too many questions left unanswered.

Part of this problem is caused by the authors reluctance to "name names"—brand names, that is. Along those same lines, a few seem reluctant to condemn or endorse any particular filtering system (such as undergravel, hanging, internal or canister). None of these writers can condemn particular products and their manufacturers. This is understandable, to some extent, due to pressure from major advertisers and the threat of lawsuits. For that same reason, I cannot condemn any particular product either, though believe me, I'd love to!

My search has been further complicated by the extravagant claims from virtually all of the manufacturers. Often, what is *not* said is as critical as what is said. A case in point: hanging power filters. They all tout their great flow rates and ability to oxygenate the water, which is great for marine systems and those who use mostly plastic plants. What they *don't* say is that this is not what you want if you desire to

[†] For those new to the hobby, a Dutch tank is a heavily planted tank—a true aquatic garden.

^{††} Takashi Amano is a Japanese aquatic designer, author and photographer whose aquariums are considered to be the most beautiful in the world. His designs incorporate extensive use of plants, and he is considered an expert on the subject. His book "Nature Aquarium World," (T.F.H. Publications) is recommended reading; it is both highly inspirational and educational, though it is (along with most books on the subject) incomplete in its education on certain topics.

grow healthy plants—and not algae. (This will be covered in a future installment; don't toss those filters yet!)

When it comes to exaggerated claims, the manufacturers of water treatments and fluorescent bulbs are definitely the kings. A few brave writers have hinted at what one should stay away from, but again, they can't name names. For example, several have stated, and I concur, that you should definitely proceed with caution when using bulbs that claim they are good for both marine systems and freshwater plants. I have been the victim of one particular manufacturer's sincere (and convincing) claims that their bulbs are good for freshwater plants. They *can* be, but my personal experience leads me to believe that conditions in the tank would have to be almost ideal, and they're best used in deep tanks. (This, too will be covered in a future installment.) I've found that they *are* quite good for the health and well being of one lovely, luscious, freshwater friend: algae! My misadventures with this one bulb has kept me away from another manufacturer's product—which could be the answer to my prayers—strictly due to my suspicious nature. These two products seem similar, so...

If one were to believe all the claims of the various water additives, conditioners, buffers, treatments, eliminators, etc., it would appear that you could just mix a dozen or so of these products together, dump it in a new tank, add fish, sit back and never have another worry. If a little problem arises, just add this other product (along with its companion product) and PRESTO! No worries, mate!

I, for one, am of the old school—the less that one adds to the water, the better. I'm sure many of you more experienced hands agree. We're all in good company, for most experts concur with this; remember that your fish are in a closed environment! Just how many chemicals do you want to add to that soup that they live already in?

Sadly, most of you have had similar experiences, but hopefully I've got you all fired up by now and you're ready to do something about it. Are you ready to take action and name names? The fill-in-the-blank survey that accompanies this article is only one aspect; I also need your opinions and answers to certain subjects that plague me and perhaps you. Our first subject: ADJUSTING pH.

1) We all know that nitrates cause algae problems, but nitrate's partner in crime is phosphate. Many authors have stated this, but none that I've read ever specifically state whether or not SODIUM BIPHOSPHATE, which is commonly used to lower pH values, breaks down into phosphate (which would lead to algae problems). Does it do a lot of potential damage? A little? Negligible? Note: Consider use of approximately one-half teaspoon to five gallons to bring our highly alkaline water to neutral, nitrates 10-20 ppm and a 1/3 water change bi-weekly.

2) Takashi Amano is adamant that one should not use "any chemicals" to lower pH. It should be noted that Mr. Amano uses sophisticated and expensive CO₂ equipment which efficiently maintains pH—and we don't know what the pH and hardness of Japan's tap water is. The only non-chemical alternative would be peat. Since peat softens water and soft water doesn't buffer well, would we not be reducing the buffering capacity to practically nil? What about the use of peat for softening water and its subsequent effect on buffering capacity?

3) Why NOT use chemicals (as opposed to peat) to lower pH?

4) A breeder suggested to me that a manufacturer's product that contains a mild acid (Sulphuric Acid) should be used to lower ph, but in hard water, it "rebounds" (water returns to its original ph) in 24 hours. Apparently the only way to get around this problem is to add yet *another* chemical, a buffer that softens water and comes in tablet or powdered form. Does this work for you (if you have little or no algae problems)?

FUTURE ARTICLES

Water Treatments

Filters/CO²

Lighting

Plants



5) If you have healthy plants and minimal algae problems, what do you recommend to lower and maintain pH? (name brand names/products)

6) Have you found a link between using activated carbon and excess phosphates and/or algae problems? (name brand names/products)

I already know some of the potential answers to these questions, for I have recently acquired a Phosphate test kit—boy, was I surprised! But nothing can replace *your* input and *your* experience. The success of this series relies heavily upon your response, so please...the more the merrier!

BASIC GUIDE TO THE SURVEY: Address questions one thru six on a separate piece of paper; or, if you're the type that just hates to put pen to parchment, call me at (703) 553-0522—evenings around eight or weekends around noon are best. Next, please fill in the handy-dandy form at right. Also...please think scientifically when answering; could your triumphs or problems be attributable to something *other* than the designated item/product? This is one of the dilemmas of fishkeeping—everything is interrelated. You can choose to describe a "problem" tank or one that's going quite well—or both! To that end, don't be afraid to photocopy the survey and submit profiles of several tanks. If you wouldn't mind my contacting you to clarify a point (or whatever), please include your name and home phone number, and *please respond by March 21*. Send all replies to:

Christopher Wright/WaterWorks
914 16th Street South
Arlington, Virginia 22202-2606

If all goes well, we will spawn a series of concise, precise articles that will (again, hopefully) make it easy for just about anybody to set up a lovely little tank with beautiful plants and happy fish. All articles will be aimed at providing optimal water quality and *minimal* algae growth.

Note that we're *not* looking to establish a tank that is so heavily planted or lighted that it would require CO² enhancement; there's plenty of information that covers that!

THANKS in advance for your participation—see you in two months!

FRESHWATER SURVEY

This tank does have algae problems Tank has little or no algae problems

Type of tank: No live plants Lightly planted Medium planted
 Heavily planted

Type of lighting plants prefer: Bright light Moderate light
(check all that apply) Low light

Size of tank (gallons): _____ Depth of tank: _____

FILTRATION Internal Power Filter Hanging Power Filter
 Canister Filter Undergravel Filter (w/powerhead)

Brand name/model: _____

Is the output of this filter reduced? Yes No What percent? _____

Do you use CO² enhancement? Yes No Frequency/Amount _____

LIGHTING Number of bulbs used: _____ Wattage (of ea.): _____

Brand name/model: _____

(fill in second line only if you "mix" bulbs on this tank)

Hours on each day: _____ Do you use a midday break? Yes No

Do you use add-on reflectors? Yes No

WATER TREATMENTS/FILTER MEDIA (Use brand/product names):

Activated Carbon _____

Ammonia reducer _____

Phosphate reducer _____

Nitrate reducer _____

Synthetic, multi-function water treatment (typically bagged & placed in filter): _____

pH adjuster _____

pH buffer (if used) _____

Plant Fertilizer _____ Frequency _____

WATER CHANGES Amount changed _____ % How often _____

GENERAL CONDITIONS IN YOUR TANK pH _____

Ammonia _____ Nitrites _____ Nitrates _____

CO² _____ Phosphates _____ Temperature _____

This tank is exposed to: Some direct sunlight No direct sunlight
 Only indirect sunlight

Do you consider your tank to be: Over populated Under populated
 Just about "normal" for size of tank

Do you have wide pH fluctuations or pH crashes? Yes No

Fish are fed: Heavily Normally Lightly Frozen or live worms or fish

SPAWNING THE CHOLATE GOURAMI

A B.I.P. report by Ilene Alvis
Kitsap Aquarium Society

In August of 1993 I purchased four Chocolate Gouramis (*Sphaerichthys osphromoides*) from my favorite store. I knew very little about them except they are a small species of gourami and I liked them.

When I got them home, and while they were still in the bag, I looked them up in my *Exotic Tropical Fishes* book. (Axelrod, Vordenwinkler, Emmens, Sculthorpe. Pronek, Burgess, 1988. T.F.H. Publications). I learned they are caught from slow moving streams and peaceful and shy, like very soft, slightly acid water and like to be warm. 82 degrees or better.

Using this as a guideline, I placed them in a seven gallon tank that has been running undisturbed for five or six years. It has a small subsand filter, a thin layer of gravel and three water sprite plants that have spread across the surface and shades the light from the 14 watt florescent fixture that sits on top of the glass lid.

The history of this tank is to hold a pH of 3.8 which is considerably lower than the "slightly acid" it says in the book. But I know if I attempted to bring it up to the recommended pH I would be doing a lot of water changes and in such a small tank it would be difficult to control wide and rapid fluctuations. I decided on stability and left it as it was. The temperature is 84 degrees and the humidity in the hatchery is 82 percent. I slowly adjusted my new fish to these radical conditions.

They're not real colorful considering the brilliant colors and patterns displayed by most of the smaller gourami species. They are mostly a dark chocolate brown with three white or yellow stripes circling their short, stubby bodies.

These are shy fish that move slowly and methodically through the tank with their fins, for the most part, held close to their bodies. I offer them small amounts of flake food which I have never seen them eat, preferring instead, baby brine shrimp, frozen adult brine shrimp, frozen blood worms and live mosquito larvae.

There is a lot of disagreement of exactly how to tell the sexes apart. Some of the books mentioned fin shape being different but the few times I saw them spread their fins, I could not see it. Color is also supposed to be a factor, but none of the four fish was colored exactly alike. So I put all four of them together hoping they would sort it out themselves.

They did. Within a month I only had two left. The other two were dead. I never saw torn fins. I never saw anything that told me of any

kind of aggression going on when I wasn't looking. Except two bodies.

By now I had acquired book 3 in the *Breeding Aquarium Fishes* series by Dr. Herbert R. Axelrod and Lourdes Burgess. (1973 by T.F.H. Publications, Inc. Ltd.) There are three separate articles about spawning the Chocolate Gourami in this book. From this I learned they are mouth brooders. (A not unknown peculiarity in labyrinth fishes as several species of bettas are also mouth brooders.) I also learned that the water in which they are found is floored with dead leaves and other debris and stained the color of "black coffee". (1906, an article in *Wochenschrift* by Julius Reichelt). So, to more closely emulate their natural environment, I added a handful of dead leaves and 5 milliliters of Tetra's Blackwater Extract. I also turned the air in the tank way down so it only serves to break the surface tension with a few bubbles a second. Since the bottom of the tank is covered with gravel, and the pictures in the book showed the eggs being deposited on a smooth surface, I added a smooth stone for them to spawn on. Finally, I conditioned my prospective breeders on a rich diet heavy with live mosquito larvae.

On the 3rd of October, I noticed the fish with the least amount of red on the tail fin looked like it had a mouth full of something it didn't know what to do with. I checked in my *Breeding Aquarium Fishes* book and it looked exactly like the pictures of a fish carrying eggs!

Looking in on them several times a day, (okay, four times an hour) I noticed that while the normal looking fish ate heartily on the baby brine shrimp and mosquito larvae, the one "carrying" would make a quick little dash toward the food, then quietly retreat to the back corner of the tank without eating.

At this point I began calling the one "carrying", the female, and the other one the male. But I have also heard from someone whose opinion I respect, that it is the male who broods the fry. Since I did not witness the spawning and don't know which sex did the brooding. (Although if it is the male, then in this instance the female has more color, is larger, and more aggressive than the male.) For simplicity, from this point I will refer to the fish carrying the eggs as the female.

On Wednesday, three days after I noticed her carrying the eggs, I observed her "flaring" her fins at the male each time he swam past her. I

took this to mean she was uncomfortable with his presence so I removed him to another small tank with a similar pH.

Each day after this I saw her seldom as she spent most of her time hanging quietly among the plants in the back of the tank. But when I did see her, she still looked like she was carrying something in her mouth. A pouch-like area below her chin, and between her gill openings was distended to a small degree. I offered her a little food during this time as a test. Had she eaten, I would have known the eggs, if there had been any, were gone.

I had no idea how long she would carry the eggs and/or fry. The only book I had that talked about spawning Chocolate Gouramis had the female eat the eggs after three days. Then on Friday our club librarian told me the club owns a book that has an article on the successful spawning of the Chocolate Gourami. In the book *Gouramis And Other Anabantoids* by Hans-Joachim Richter (1988, T.F.H. Publications, Inc.) he says, "The fry, about 5mm long, emerge from the throat pouch in about 14 days."

By my count that was Sunday, October 17th, "Gourami day!" as my husband called it. Sunday morning I go up early and turned on the lights in the hatchery and took a highly anticipated look in the little tank.

Nothing. Just the female in the back and as far as I could tell by peeking through the plant fronds and algae, she looked no different.

Later in the morning, while doing water changes on other tanks, I started to add a little water to the tank to make up for evaporation. When the first drops of water struck the surface a sudden movement made me stop and look more closely.

I expected to see a tiny, clear sliver with eyes which is what most baby fish look like. But this little guy looked like a miniature duplicate of its parents. It's chocolate brown with a pale face and a wide white strip that circles its body at about mid length. The most obvious fin that can be seen is what look like two little nubs where its ventral fins are. It's probably the cutest baby fish I've ever seen. I was on my own as what to do next as all of the articles I have found about them ends with the emergence of the fry. The female looks like she is still 'carrying' as her throat pouch is still distended and she has not eaten the mosquito larvae I put in for her.

Do I wait until she looks normal then take her out? Does she eat her fry? Does she care for them after they are free swimming. (As of this point, I think the answer to the last question is "no". The three fry I have seen are as far from her as they can get and still be in the same tank!)

I saw the fry eating the shrimp nauplii. I left the female alone and I'm glad I did because by Monday night there were over thirty fry that I could see.

By then I saw the female also eating the shrimp so I assumed she had spit out the last of her kids. At this point I decided to take her out. First, I really wanted the fry. Second, the fry are not so perfectly camouflaged for nothing. And third, they were all staying well away from her.

I put her in the other 7 gallon tank with the male. It is set up exactly like the first. Within five minutes of putting her in tank, she and the male were getting reacquainted by simulating the spawning embrace. They circled each other slowly at a distance, then moved together until they were cupped around each other, then swam apart while gently brushing their tails against each other.

They repeated this behavior a half dozen times in the 10 minutes I watched. Then the female decided enough was enough, and chased him to the back of the tank.

At three days old the fry are eating brine shrimp nauplii and microworms. I have counted over thirty of them and watch fascinated as they move in the same slow motion as their parents.

At 10 days I notice there are less of them and while I have seen one dead one, I can see nothing obviously wrong with the others. Thinking perhaps the small ones are not able to eat the shrimp, I start feeding microworms several times a day.

At 20 days there are few fry left and I am concerned I won't have the 6 necessary to qualify them as a confirmed spawning. I still can see nothing wrong with what fry are left, but they are still disappearing. There are three fry that are easily larger than the others, perhaps the ones that emerged first. But they certainly are not large enough to eat their siblings.

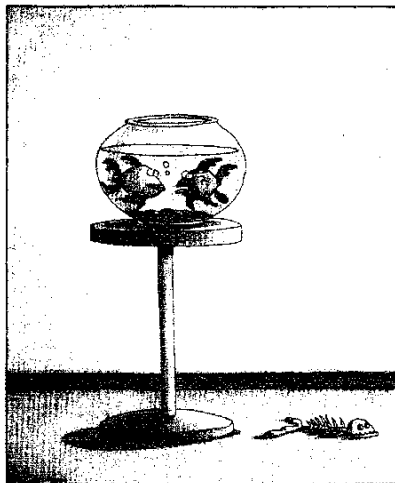
On day number 25 I spend a long time peering into the small, dim tank and I finally get an answer to the disappearing fry.

By now there are only seven or eight of them left. And I watch as two of them approach each

other in their slow motion fashion when suddenly one of them darts forward and runs head-on into the other! The both jump off in opposite directions like colliding ping-pong balls.

Is this why I have so few of them left? Is this how the adults and the fry have killed each other without leaving torn fins or ruffling scales? By inflicting internal injuries? I think so. Maybe the food opportunities in their natural habitat are so few, competition among breeding pairs, and growing fry demand this culling process.

I don't know for sure, but I do know the next time I set them up it will be in a much larger tank so the adults can avoid each other and, if I am successful in getting them to spawn again, so the fry can spread out enough so I can raise more than 6 of these pretty by mysterious little fish.



"I guess he made it . . . It's been more than a week since he went over the wall."

1996 PVAS Income and Expenses

Bank Book Balance Beginning of Year (1-1-96)	2,017.03
Income	
Auction	13,868.51
Membership	539.50
Monthly Auction	24.00
Monthly Raffle	207.00
Raffle	736.00
Workshop	460.00
Field Trip	220.00
Miscellaneous	735.13
Total Income	16,790.14
Total Cash Available	18,807.17
Expenses	
Auction	7,799.30
Auction Expense	1,563.21
Insurance	185.00
Meeting Expense	323.80
Membership	30.00
Phone Bill	600.98
Postage	1,504.30
Printing	903.48
Raffle Expense	418.57
Speakers	314.56
Supplies	111.78
Taxes	25.00
Workshop	1,054.00
Field Trip	273.78
Miscellaneous	1,583.20
T-shirts	
returned checks	
Erol's Internet	
Total Expenditures	16,790.96
Bank Book Balance End of Year (12-31-96)	2,016.21
Cash Increase/(Decrease)	(0.82)

1996 PVAS Expenses

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Auction			3139.79	5.00		2192.77	6.00				2391.06	64.68	7799.30
Auction Expense		27.01	144.91		91.53	29.84	103.17				666.75	500.00	1563.21
Insurance						185.00							185.00
Meeting Expense		11.16							31.25	11.16	42.56	227.67	323.80
Membership			30.00										30.00
Phone Bill	44.22	47.08	50.15	54.99	49.16	48.37	51.04	44.22	50.51	48.77	64.79	47.68	600.98
Postage		137.50	160.00			104.00	328.80			110.00	32.00	632.00	1504.30
Printing		172.58	136.00	0.73		125.00	47.17	125.00		150.00		147.00	903.48
Raffle Expense		1.03	193.38			102.00	54.96			67.20			418.57
Speakers									121.00	116.56	77.00		314.56
Supplies		50.40						61.38					111.78
Taxes			25.00										25.00
Workshop/Show					151.00						903.00		1054.00
Field Trip		265.00	8.78										273.78
Miscellaneous													0.00
T-shirts					655.00	613.20	212.00						1268.20
returned checks				108.00					95.00				320.00
Erol's Internet													95.00
TOTAL	44.22	711.76	3888.01	319.72	795.69	3400.18	803.14	230.60	297.76	503.69	4177.16	1619.03	16790.96

1996 PVAS Income

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
AUCTION													
1995	127.33	369.21	107.74										604.28
MAR		4519.50	118.17		32.00	121.00							4790.67
JUN					3171.00		188.99	48.00	358.66				3766.65
OCT										4587.25		119.66	4706.91
MEMBERSHIP	36.00	84.00	36.00	12.00	12.00	96.00	42.00	12.00	36.00		113.50	60.00	539.50
MONTHLY AUCTION		3.00	3.00	6.00	5.00		2.00	2.00	2.00		1.00		24.00
MONTHLY RAFFLE		34.00	35.00	24.00	28.00		16.00	25.00	25.00		20.00		207.00
RAFFLE			150.00	45.00		367.00					174.00		736.00
WORKSHOP											460.00		460.00
FIELD TRIP													220.00
MISCELLANEOUS		5.05	172.68										177.73
shrimp eggs		97.40	35.00		35.00		64.00		35.00				266.40
T-Shirts						149.00	15.00				127.00		291.00
TOTAL	163.33	812.66	5058.92	205.17	112.00	3904.00	327.99	87.00	456.66	0.00	5482.75	179.66	16790.14

POTOMAC VALLEY AQUARIUM SOCIETY
PO BOX 664, Merrifield, VA 22116

Application for Membership

Date: _____

Name: _____

Street: _____ Apt. _____

City: _____ State: _____ Zip: _____

Telephone: _____

Optional information:

Occupation: _____

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

Number of aquariums: _____ Time in the hobby: _____

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

Reason for joining: _____

Membership dues for PVAS are:

Individual/Family: \$12/yr

Corresponding: \$ 9/yr

Junior (under 18) \$ 5/yr

Please send application and check to the address above.

SUPPORTING SHOPS

ANNANDALE PET SHOP

7406 Little River TrnPk.
Annandale, VA 22031
256-2400

AQUATIC ENHANCEMENT

PO Box 22677
Alexandria, VA 22304
765-4620

CREATURES 'N CRITTERS

9575 Braddock Rd.
Fairfax, Va
978-0745

DISCOUNT PET CENTER

9028 Mathis Ave.
Manassas, VA 22110
361-7769

PET MART-TYSONS

8417 Old Courthouse Rd.
Vienna, VA 22180
281-8181

PETS ETC-HERNDON

462 Eiden St.
Herndon, VA 22171
437-9667

CUSTOM AQUARIUM CONCEPTS

293 Sunset Park Drive
Herndon, VA 22094
(703) 689-2815

ANIMAL EXCHANGE

765-A Rockville Pike
Rockville, MD 20852
424-PETS

AQUARIUM CENTER

Liberty Rd. at Offut Rd.
Randletstown, MD
521-4529

BROTHER'S PETS

13810 Georgia Ave.
Aspen Hill, MD 20906
460-4600

CONGRESSIONAL AQUARIUM

162 Congressional Ln
Rockville, MD 20852
881-6182

DISCOUNT PET SUPER- MARKET

1321 A&B Rockville Pike
Rockville, MD 20852
309-9110

FISH FACTORY AQUARIUM

582 N. Frederick Ave.
Gaithersburg, MD 20877
977-7500

HOUSE OF TROPICALS

7389F Baltimore-Annapolis Blvd.
Glen Burnie, MD 21061
761-1113

MARINE CARE SPECIALISTS

16065 N. Frederick Rd.
Rockville, MD 20855
330-0720

MARYLAND TROPICALS

13884 Old Columbia Pike
Silver Spring, MD 20904
879-0200

MONTGOMERY TROPICALS

7845-G Airpark Rd.
Gaithersburg, MD 20879
670-0886

RICK'S FISH & PET SUPPLY

1003J West Patrick St.
Frederick, MD 21702
694-9664 831-4747

SHOWCASE AQUARIUM

11248-11250 Triangle Ln
Wheaton, MD 20902
942-6464

TOTALLY FISH

14332 Layhill Rd.
Silver Spring, MD 20906
598-2229

TROPICAL FISH WORLD

16529 S. Frederick Center
Gaithersburg, MD 20877
921-0000

TROPICAL LAGOON

9439 Georgia Ave.
Silver Spring, MD 20910
585-6562

AQUATIC CREATIONS LTD

2909 Urbana Pike
Ijamspille, MD 21754
(301) 831-8200

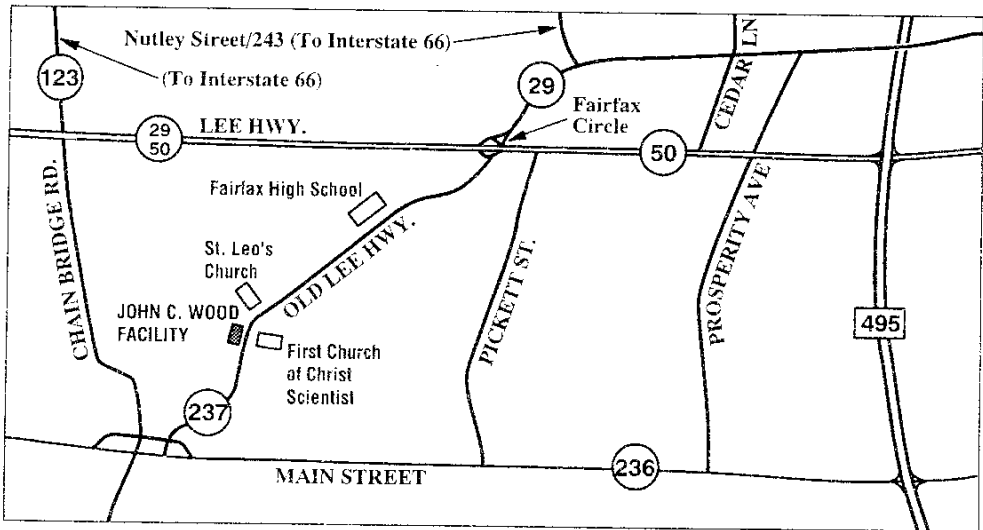
RARE FINS

463 South Norwood Ave.
Newtown, PA 18940
(215) 504-5426
e-mail rarefins@voicenet.com

POTOMAC VALLEY AQUARIUM SOCIETY
P.O. Box 664
Merrifield, VA 22116-0664



*David Snell
14328 Artillery Court
Centerville, VA 22020*



MEETINGS are held at the John C. Wood Facility, 3730 Old Lee Highway (Route 237), Fairfax City, Virginia. We meet in room 7, which is located behind the police station. Doors open at 7:30 and meetings start at 8:00—EVERYONE IS WELCOME!