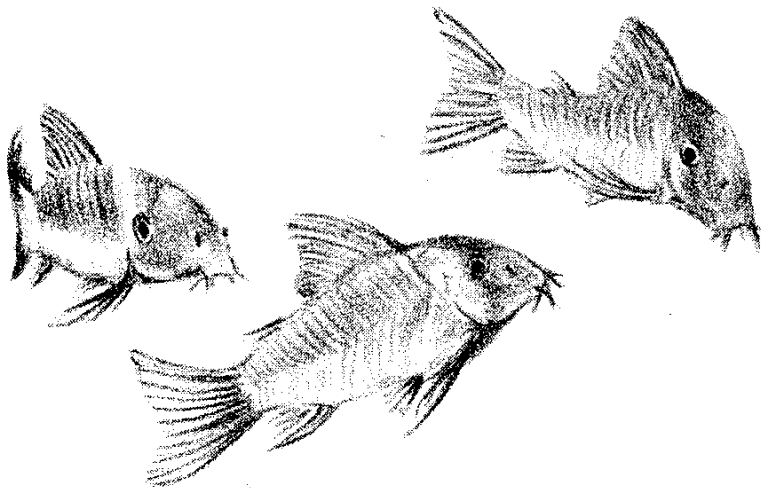


DELTA TALE

Official Publication of the Potomac Valley Aquarium Society

Volume 28 • Number 5

September/October 1997



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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 thru the dissemination of information and advice, and the promotion of good fellowship among the membership by organized activities and competitions.

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All correspondence to the society and to *Delta Tale* should be directed to:

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COVER: *Corydoras aeneus* trio
by Christopher F. Wright.

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FROM THE PRESIDENT:

Our big fall weekend is fast approaching. On Saturday, November 1, we will have a series of talks on various aspects of our hobby. Two of the confirmed speakers will be Rusty Wessell and Wayne Leibel, both nationally-prominent members of the American Cichlid Association. Dr. Leibel has written extensively on South American cichlids in more than 30 articles in Aquarium Fish Monthly, as well as Tropical Fish Hobbyist and FAMA. Rusty will talk on his recent collecting trip to Belize. Dr. Leibel will do a survey (over 100 slides!) of South American cichlids, with strategies for raising and breeding. There will be talks by at least two other speakers as well. Saturday night will be our club's annual banquet, with a second talk by Dr. Leibel on the history of the cichlid hobby. And Sunday, November 2, will be our fall auction. This weekend promises to be a lot of fun and will definitely make you a better hobbyist. And the Saturday afternoon talks are entirely free of charge. If your fish could talk, they'd ask you to attend!

Also fast approaching is the November election of club officers and Board members for next year. Please consider becoming more active in our club by agreeing to serve on the Board or as an officer. No experience is necessary, just some fresh energy and enthusiasm! **THE CLUB COULD REALLY USE YOUR HELP!**

Dave Snell has really put a lot of effort into the PVAS home page, and it shows. If you haven't accessed it recently, check it out. You'll be really impressed.

The Delta Tale has been including a lot of original PVAS articles in recent issues, and while no one has yet offered to take over the editorship, at least John now has a few 'associate' editors to help out. I might mention that the 18 months I acted as Tale editor years ago were surprisingly the most satisfying of all my club 'jobs' - you might consider taking on this important job for our club.

**WHAT MORE COULD YOU ASK FOR? TRICK-OR-TREATS ON FRIDAY NIGHT,
AND AN OUTSTANDING WORKSHOP WEEKEND ON SATURDAY AND SUNDAY!
SEE YOU AT HOJO'S ON NOVEMBER FIRST AND SECOND!!**



Frum the editor's desk

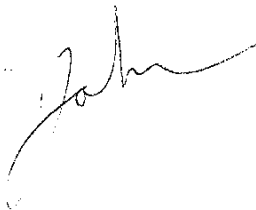
Now that summer is over it's time to get back to being involved with your fish again. We've got lots going on over the remainder of the year to keep you busy.

Our Fall Workshop and Auction are coming up real soon (Nov. 1-2). We'll be back at Howard Johnson's in Alexandria for this weekend. There's a great line-up of speakers set for Saturday's Workshop, and it's **FREE**. Saturday night there will be a banquet featuring Dr. Wayne Leibel as the after dinner speaker. Dinner will be a buffet from the same caterer we used last year (they got very good reviews from everyone last year). Dinner will include salads, chicken and beef, vegetables, deserts, coffee, tea etc. PVAS will be picking up part of the cost of dinner for PVAS members (actual cost will be between \$20 - \$25, depending on turnout, members will pay only \$15). Hopefully this will be an incentive for more of you to attend and get an extra benefit from your membership. Sunday will be another of our always great auctions. There should be lots of stuff, fish, tanks, supplies, offered for sale; plus raffles throughout the day. Complete details for the Workshop and Auction can be found in this issue. You can also check out our hotline and web site.


Coming up in November is the election of officers for next year. If you have any interest in running for an office see Pete (or any other current officer). You don't need any type of prior experience or knowledge, just an interest in helping out the club a little. We really need to get more new people involved in helping to run things.


I've gotten a pretty good response to most of my recent requests for help so I'll try another new one. I could use someone to coordinate distribution of *Delta Tales* to shops. You wouldn't have to deliver them yourself just distribute them to volunteers at the monthly meetings who would then visit the individual shops. Also, I could always use another typist or two, and of course authors and artists, not to mention the big one-editor.

Until next time...



WHAT'S HAPPENING!

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

 Check out the PVAS Web site at <http://www.erols.com/dsnell/pvas.htm>

Oct. 20: PVAS Monthly Meeting - Please note the change from our usual meeting night (the 2nd Monday of the month is Columbus Day and the Wood Facility is closed). The meeting will include all of the usual stuff: Program, door prize, raffles, mini-auction, bowl show, etc. Doors open at 7:30 meeting starts at 8:00. Additional parking is available in the school parking lot next to the Wood Center (turn up the side street at the traffic light).

Nov. 1 - 2: Fall Workshop, Banquet, and Auction. A **FREE** full day of speaker of a variety of topics Saturday. Banquet w/speaker Saturday night. Auction all day Sunday. See the following pages for complete information. We have a great line-up of speakers and our auctions are always huge. I strongly encourage you to attend either, or better yet both, days.

Nov. 10: PVAS Monthly Meeting. All of the usual stuff plus election of officers (elections only take a very short time so don't worry about being bored by lots of election stuff before the program starts).

Dec. 8: PVAS Christmas dinner. Details in the next issue.

If you know of any "fishy" happenings let me know and they can be included here.

J.M.

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: Plastic fish bags. Standard thickness and 3 mil extra heavy. Several sizes of each will be available at PVAS monthly meetings and the Fall Auction.

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

Julidochromis marlieri

By Lorne Williams, PVAS

I bought some *Julidochromis marlieri* at a pet shop in New Jersey and decided to try to spawn them. I bought a pair and the retailer said that the females were the larger and the males were the smaller ones in the tank. In reality the males are the larger and the females are the smaller, but I did have a viable pair and placed them in a 29 gallon aquarium.

The male was very brutal to the female but she survived by virtually living at the top edge of the aquarium. She would grab a few pieces of food before they sank to the bottom of the aquarium, the males domain. One day I saw her in the bottom of the aquarium and she was not being harassed by the male. I thought they might spawn soon and they did. She laid eggs in a cave of rocks. The male immediately fertilized the eggs as they were being laid.

I had conditioned the breeders on baby brine shrimp, color flake food, and live blackworms. The aquarium had one tablespoon of epsom salts and one tablespoon of marine salt per five gallons. Filtration was accomplished by a sponge filter and the water was kept at about 80° F. As with most Tanganyikans I limited my water changes to about 10% per change and kept good water quality by not overfeeding.

The fry were fed baby brine shrimp and microworms and grew very fast. While raising the first batch of fry the parents spawned many time and soon I had about six different batches of fry in the same tank with the parents. I have read that they can pace their broods at about 12 to 15 per spawn or have broods of around 200 with less frequent spawnings, but I have always had broods of 12 to 15. Parents and siblings of different sizes got along together and before long I had over 100 fry of different sizes in the tank.

I decided to remove the fry to another aquarium after about five months and immediately the pair bond was broken and the fish began to fight. They respawnd after a while and in the future I will always leave some of the fry with the parents to keep down aggression.

I think the Tanganyikan cichlids are an excellent introduction into the world of cichlids because there are species whose size lends them to smaller aquaria and many species are sexually dimorphic so you don't have to raise up six to eight to try and get a breeding pair, or at least that has been my experience.

FAAS Update

Alex Townsend

The July/Aug FAAS Report arrived last week (mid July) and I was quite surprised, to say the least, that the Report editor chose to publish an excerpt of the FAAS Update that was published in the May/June '97 Delta Tale. Actually, I think the piece was used to strengthen a serious point that the FAAS Board of Directors is trying to get across to the FAAS delegates who are responsible for informing their club members of FAAS activities, programs, etc. It seems that just about all of us, myself included, have been apathetic about these responsibilities. Hopefully these periodic updates in the Delta Tale will help remedy some of the previous oversight. It's important to remember that support for (and involvement with) FAAS helps to strengthen PVAS's own activities and, ultimately, promotes the hobby.

Also on a serious note, especially for those who edit club newsletters or contribute articles for publication therein, is a very informative piece titled "Libel and Your Aquarium Club Newsletter: Engage Brain Before Putting Mouth in Gear" by Dale Speirs, FAAS Parliamentarian. Dales explains that one of his "sidelines" is assembling a collection of libel from club newsletters. I can say with some certainty that the Delta Tale, thanks to the efforts and ethical standards of our long-time editor, has been free of personal accusation and innuendo, but a reminder to all obviously doesn't hurt. To this end, a few excerpts from Dale's article....

- "Libel may affect you even though you had nothing to do with it. If your club editor prints libel, the club could be bankrupted by a lawsuit, not just a judgement but the cost of legal fees to defend. If the club is unincorporated....members can be held jointly liable to the extent of having their bank accounts frozen and liens on their cars or houses."
(note: PVAS is incorporated.)
- "In making remarks, one must be prepared to prove them as reasonable in court, if sued. Truth is the best defense against a libel claim, but it must be based on objective facts and testimony."
- "Libel lives on after you have forgotten it, not only in print but on the Internet where lawsuits are underway for postings made years ago."

Dale recommends that club bulletin editors consider the following points before sending an issue to print, but I think some of this applies to all of us:

- "Is the controversy personal? When you start name-calling..., you are being unreasonable."
- "Never attribute motives or beliefs to an individual unless he/she has stated them before in print."

- "After writing an article, set it aside for a day or two, then reread when you are calmer."
- "When making serious allegations, you'd better have true copies of documents, photographs, and other evidence that will stand up in court. In libel law, you are guilty until you can prove yourself innocent."
- "Don't wash dirty linen in public. Your club bulletin represents your club not only to the membership, but also anyone you exchange with." (As keeper of the club's library, I've seen examples of this and I can assure you it reflects badly on the entire organization, not just on the individuals involved.)
- Will the proposed item to be printed contribute to the ideals of aquarium keeping as a hobby?

As I mentioned above, PVAS has been remarkably free of problems in this regard and I can't foresee any on the horizon. Nevertheless, we do occasionally see it in other clubs. I share Dale's sentiment when he notes that "...it saddens me that some people lose sight of the pleasure in this hobby and make it into a way of life rimmed with anger." 'Nuff said!

Maxine Gorsline ended her two-year stint as FAAS president with this issue of the Report. In her final "President's Column" she states that her biggest regret was "not being able to open up the lines of communication between the FAAS working members and the individual societies." While I wasn't paying as much attention as I should have been, I must say that the effort put into FAAS by Maxine and the other board members was definitely noticeable and I think that is what really convinced me of the value of FAAS and prompted me to start doing these updates for the Delta Tale. Maxine and the other working members of FAAS deserve our thanks for a job well done.

There's more to be found in the July/Aug FAAS Report, including a reprinted article on expanding a club's Breeder's Award Program and a legislation update. I'll bring a copy to the next meeting for anyone who's interested. Finally, Marge Anderson (FAAS Report Editor) is looking for good quality drawings of tropical fish and aquatic plants for publication in the Report (line drawings and computer images accepted). Those of you with an artistic flair are encouraged to send your drawings to her at 1649 Moorefield, Austintown, OH 44515.

WATERWORKS®

Christopher Wright & PVAS Friends

This month's article will focus on "chemical" aspects of maintaining a healthy environment for your planted freshwater tanks i.e., water additives and treatments.

Many moons have passed since I originally set out to discover just what it would take to get my tapwater to a pH level of neutral to slightly acid. Let me tell you, seekers, it ain't been fun... but it certainly has been educational.

What started this whole series of articles was my search for a method of keeping my pH values at or below neutral without adding any phosphate to my tanks and without using peat. Seeking additional input, I created a survey for PVAS members to respond to; I received very few responses. Now I believe I know why I didn't get much response: many of you didn't know how to achieve this goal either (unless someone is holding out on me—you wouldn't do that, would you?).

Some of you may be wondering, "Why worry about the pH so much?" Well, for starters, ammonia is much more toxic at levels above neutral. At levels below neutral, ammonia becomes *ammonium* and the toxicity decreases dramatically. For those of you wishing to keep and, more specifically, *breed* many popular species, it would behoove you to get that pH level down. There are many fish that simply will not breed unless their water is just right, and there are even more fish that won't do well in unfamiliar waters.

Furthermore, most freshwater plants prefer their water slightly acid. You will find, however, that the majority of them will adapt to a pH of above neutral thru 7.4, particularly if they're domestically raised. Being that almost all plants are raised here in America, tolerance is good for all but a few (such as, reportedly, the Madagascar Lace plant). Still, it's a good idea for you crypt keepers and sword lovers to keep your water close to natural conditions—happy plants means happy fish.

So...what to do...what to do...

The most "organic" alternative is to filter your water over peat. At a PVAS meeting this past spring, we had an open floor discussion of this subject—it's the best way to learn. And I did.

My understanding is that it's best to prep the "peat water" in a separate container or tank. The preferred method is to place the peat in a nylon bag (women's hosiery will do) and set the bag up in a filter with good water flow. The idea is to make a concentrated batch that one would mix with dechlorinated water until they achieve their targeted pH. Sounds easy enough, and there are quite a few that do this.

The only drawbacks are that your water will have the color of very weak tea and water changes will have to be made regularly or you might have a pH crash. As far as this "crash" business goes, just be careful. I suggest that you experiment, test and test some more until you're certain of your water's qualities and can predict its patterns and behavior.

Aquarium quality peat is quite expensive, but there's an easy way around the expense; buy your peat from a garden store. Most of the big hardware/lumber stores carry

peat that will work just fine. But you must be absolutely certain that it is 100% pure peat/sphagnum peat moss with *no additives whatsoever*. Even after reading the label, you'll probably want to choose a "test subject". Got any ruffians in isolation? Try them first. To my way of thinking, they'll be being put to good use! You might want to look for Canadian peat in the big bags. You'll have enough to last you 'til the millennium, and you can certainly mix it up with your garden soil...or bag it and sell it at the next PVAS auction.

I plan to try peat out sometime, it can't be any worse than the chemical adjusters I've been using. As far as I know, peat is the only organic solution. Now let's get into the crazy world of water chemistry.

After exhaustive research and testing of alternatives, I'm beginning to believe that the best solution may be the use of Reverse Osmosis water for those who want to have pristine plant tanks and/or keep and breed difficult, delicate fish. Simply put, the R/O filter removes *everything* from the water: impurities, salts, minerals, various trace elements, etc. One then adds back in the desired chemicals to create the pH and buffering capacity they desire. It may go without saying, but you are literally "building" your water from scratch, which is a highly desirable goal in many instances, and it isn't nearly as scary or difficult as one might imagine. Many R/O water users combine their R/O water with dechlorinated tap water to achieve a specific pH and buffering capacity.

Unfortunately, this installation of "WaterWorks" will not cover the topic of R/O filters and water—I have yet to experiment with the process—but we will, however, be discussing a few of the potential additives that you might consider for the rebuilding process. One note of import: if you're considering the purchase of a R/O unit, do your homework! There are two different type of membranes (filters) for R/O units, and they each have their own peculiarities and strong points. Most manufacturers offer both types. Plus, there is an alternative: deionization filters. They work by chemically binding the elements in water, thus removing them. You may want to look into the strong and weak points of these units too.

O.K., so if you can't afford a Reverse Osmosis unit, or if you just can't be bothered with the work involved, what are the alternatives?

The good news is that there are many. The bad news is that most of these chemical alternatives contain phosphates. This takes us back, once again, to my original dilemma: achieving slightly acid water without introducing phosphates. Remember? And do you also recall, dear seekers, that many sources will warn you about high nitrates leading to major algae infestation, but not nearly enough sources warn of the connection between *phosphates* and algae (though this trend is shifting). In my experience, high phosphate levels are *just as likely* to cause plagues of algae—particularly brush algae (a real nasty). To further the bad news, my water (Arlington) already contains phosphates beyond the maximum level anyone could ever possibly want (an average level of .50). Your water is probably just as bad. I sure don't want to add any *more* phosphates!!! Would you?

Speaking of, ETCH THIS INTO YOUR MEMORY: if *any* product doesn't say "Contains no phosphates," IT PROBABLY DOES contain them. Fish food, for example, pretty much has to by its nature. So you're adding to the phosphate leve.

right there. A few plant fertilizers contain phosphate, which is absurd (plants require only miniscule amounts). If you'll think back to the first article of this series, I stated that, "sometimes what's most important is what they [manufacturers] *don't* say." This is a prime example.

When it comes to hidden phosphates, the biggest culprit of all is activated carbon. That's right! Activated carbon. The primary reason for the quiet exodus from activated carbon is the fact that most will leach phosphates...and I do mean *most*. Check your local retailer, and you'll notice that the highest grades (i.e. expensive) state that they contain no phosphates. At least one big manufacturer has both grades, and the "lower grade" carbon ain't cheap by any stretch of the imagination. With all the consumer protection laws out there, I sure wish someone would get up there on Capitol Hill and pass some kind of "Consumer Warning" law that addresses this problem.

Just once I'd like to see an activated carbon package labeled:

"WARNING: This product will leach phosphates into your tank long after the cleansing nature of the activated carbon is gone and cause massive outbreaks of beard algae, brush algae, despair and heartbreak. Furthermore, continued use of this product may lead to alcoholism, nervous ticks and/or divorce. Government studies indicate that the majority of fishkeepers that use this product either leave the hobby all together or resort to keeping cichlid tanks with lots of rocks and no plants or lighting."

I swear, me and my soapbox truly believe that some of these manufacturers oughta' be dipped in fish guts and then rather unceremoniously dropped in a huge tank full of starving piranhas.

It's really that bad out there...and your fish are drowning in it.

Some of you are probably wondering just when I'm going to get back around to those pH adjusters, and I will in just a minute. But the activated carbon example needed to go right here in order to illustrate just how widespread and rampant this hidden phosphate tragedy is. Warning: there are more pH adjusters that use phosphates than not. Once again, if it doesn't say "Contains no phosphates," it probably does. Just because the product comes from a big, well known manufacturer and makes lots of enticing promises is no guarantee that it won't bring you misery.

A REAL LIFE example: Last year I called the in-house marine biologist at a huge mail order company (who shall remain anonymous), and he recommended Aquarium Pharmaceuticals' pH Down™, (liquid drops to lower pH) and Proper pH™ (huge tablets that add the needed buffer). So, I tried them on two tanks for a couple weeks. I had a difficult time keeping the water near neutral and was regularly adding more pH down drops. To make things worse, Aquarium Pharmaceuticals' own test kits revealed that one, or both, of the two indeed raised the phosphate levels in my tanks. 'Nuf said? To be fair, Aquarium Pharmaceuticals™ makes any number of fine products. In fact, I use their test kits almost exclusively and highly recommend them.

Continuing with REAL LIFE examples...

This same marine biologist had also recommended several Kent Marine products, and added that this is what he personally used. But I like to favor the underdog and, of greater import, save money...sooooo, I decided to try Seachem's Acid Buffer™. This

product promises pretty much the same thing that they all do: that it will lower pH and keep it there.

Well, I did everything as instructed. The first thing that happened was it somehow reacted with Aquarium Pharmaceuticals' pH adjusters and clouded up my tank something fierce. I can't really blame it on Seachem or Aquarium Pharmaceuticals, it is probably not a good idea to change chemistry like that on a tank that's only seven weeks old, even if it is only a partial (20%) water change. And the same thing happened again, but to a much lesser extent, when I once more switched products at a later date. The worst part was that all of this scale (funky stuff) precipitated out of the water and onto the inside of my external canister filter's tubes. I was reaming those suckers out every couple of weeks for the next two months.

I must say, though, that it certainly did not "hold" the pH. It rebounded back to around 7.4 within 24 hours. Since my tap is around 7.6, it at least lowered the pH a little bit. Then I dutifully added (as instructed) more of their Acid Buffer to my tank every now and then. The long and short of it is that I tried this product on all my tanks, and the pH kept going back up. Some tanks stayed a little closer to neutral than others, but I've since discovered that these tanks consistently did better anyhow. The common denominator in the "better" tanks was large amounts of African root wood (more on that in a later installment).

But this was not the end of my experience with this product. I had a well established 29 gallon that I'd been using Acid Buffer in for a couple months. I'd been trying to stabilize it at around 6.8 pH since the beginning. One evening, I checked it before a scheduled water change, and it read 7.0. Quite pleased that this tank finally seemed to be stabilized, I proceeded with my usual 20% water change. The next evening, I was shocked to see that the water had gone completely cloudy (white) and even more oddly—and distressing—my rootwood was completely covered with this grey, slimy looking stuff and my four spiney eels and three otocinclus (the only occupants) were obviously not having a good time. I immediately checked the pH...my tank had crashed. In fact, this was the only known crash that I've ever experienced in my eighteen years of fishkeeping. The pH had dropped from 7.0 to 6.4, and the tank smelled terrible.

The next morning it had dropped to 6.2 and the carbonate hardness (KH) was down to 1.5, general hardness (GH) was 6 and CO₂ 22 mg/l. I initiated brisk aeration, performed a small water change and waited for the tank to clear. Twenty-four hours later I found the water had cleared up. Tests revealed a pH of 7.0, KH of 2, and GH of 7—not much of an improvement, but I'd take it. It would be a few days before the grey slime on the rootwood disappeared...best of all, my tough little otos and eels had survived.

What still remains a mystery to me is whether the cloudiness and slime was a bacteria die-off or chemicals precipitating out of the water. Guess I'll never know. One of my favorite PVAS "consultants," Julio, thinks that the cloudiness and slime was caused by precipitation; I think *something* (other than the fish or plants) died in there—the smell was so bad—it could have been both. He also firmly believes that the crash happened because the Acid Buffer had finally "broken" my tapwater's natural buffer (which is what always makes it rebound back to approximately pH 7.4). He has

more experience in water chemistry, and I tend to agree with this analysis. Plus, 6.4 is this products "preferred" pH range (see below).

One further note: I had two other tanks whose pH took a dive, one took a couple weeks and the other went quickly. I used Acid Buffer in these tanks, too. The tank that crashed quickly had a 15% water change at the same time as the 29 gallon... could there have been something in the water? Maybe. But the tank that went slowly happened several weeks before.

So, what's up with Seachem's Acid Buffer? Let's take a necessary, critical look, and please bear this in mind: what happened in my tanks could very well happen with other manufacturer's products. This is especially true because of the quirky, odd and confounding chemical makeup of our area's water. Our water has a reasonable general (overall) hardness, but its carbonate hardness (buffering capacity) is low due to its lack of one of the two primary chemical salts. This is a complicated and convoluted topic that will hopefully be dealt with in a later installment. It is much too complex to include now, and I've still got some major research to do.

Anyhow, at this point, I feel inclined to give Seachem the benefit of the doubt; there Acid Buffer may work just fine in other waters. I also used small amounts of Tetra's Blackwater Extract in the tank, which can soften water and thus reduce buffering capacity, but I doubt if these small amounts could have totally knocked out the tank's ability to buffer well.

On the other hand, more detailed instructions and warnings on Seachem's part could have possibly saved me and my fish from a whole lot of stress. Speaking of, let's begin with their instructions. The label states: "To lower pH, use 1 level teaspoon for every 20 gallons daily until intended pH is reached. Best if added directly to the aquarium. Thereafter, use with water changes as required to maintain pH. Larger doses may be required in very hard alkaline waters. Avoid using more than required to maintain pH. Buffers preferentially at 6.4, but manages any pH between 5.4-7.4. Use *Safe* or *Prime* for dechlorination. To raise pH use *Neutral Buffer* or *Alkaline Buffer*." (Their italics).

Following the instructions, there's a table that shows combined amounts of their Acid Buffer and Alkaline Buffer with a pH value next to them. It's confusing, because there's no explanation given. Does one *have* to use their Alkaline Buffer to nail a certain pH? If so, why doesn't their label say right up front, "Oh, guess what? You have to buy our Alkaline Buffer too, otherwise, this product may not work as expected!" Furthermore, for their acid buffer to work properly, does one have to use *Safe* or *Prime* for dechlorination?

If the answer to either of the above questions is "yes," then Seachem has done a grave disservice to the public and, tragically, themselves. If one has to purchase, and use, a combination of products to achieve a certain end, it should be stated clearly on the label. The same goes for the use of dechlorinators—one should be able to combine virtually any pH adjuster with any dechlorinator. If not, the exceptions should also be stated right up front.

As one could imagine, I was a bit reluctant to use that product anymore.

Instead, I opted for Kent Marine's entry into the phosphate-free pH adjustment market. Now their product states *right on the label* that one must indeed purchase,

and use, two products to achieve what I was now beginning to believe was the impossible: stable pH. At first, the directions were a bit confusing, but I sorted through them and knew what to do—I was a man with a mission!

I mixed up a solution of their pH•STABLE™ first and added it to my dechlorinated water. The pH•STABLE increases overall buffering capacity...yeah, you got it! This is the “buffering” part! Then, I mixed up a solution of their pH•CONTROL MINUS™ and added it until I got the pH down to around 6.8. This whole process is pretty weird, if you think about it too much, because the first product (the buffer) actually raises the pH. Then you turn around and lower the pH. But, you see, you’ve got to have that increased buffering capacity in *our* water, or it’ll crash for sure. If this doesn’t make sense, well...you’re not alone. At a recent PVAS meeting, Alex Townsend related how he’d been privy to a number of marine biologists sitting around and discussing this very topic, and there were a lot of loose ends, unanswered questions and generally befuddled water experts. Alex said that, in some areas, these guys *still* aren’t really sure why some things happen/work/don’t work the way that they do.

And I think that I’m gonna’ tackle this subject? You betcha’!!! All I have to do is find a combination that works...

Now, where was I?

Kent Marine—their stuff. O.K., here’s the skinny on my last six months of chemical warfare with their products: it has worked better for me than Seachem’s Acid Buffer, but primarily because I’ve had no crashes. I have also been much more cautious about adding additional doses to the tanks. In general, my results have been *mixed*. Out of the five tanks that I currently keep track of, one hangs around 6.8-7.0, three prefer 7.2 (though they sometimes go to 7.0) and the last tank pretty much insists on staying near 6.4.

The wide range illustrated here is a classic example of just how much conditions in the tank can affect pH. The three tanks that stay more alkaline have little or no rootwood in them—one is slightly overpopulated with few plants, the other two are way under capacity—one is medium planted, one has lots of plants. Of the two that lean more towards an acid reading, both have large amounts of rootwood in them. The tank that stays near neutral is the 29 gallon that crashed so badly six months ago. It’s population is just about right. The 6.4/acid tank is an overpopulated 15 gallon. Both tanks are about two-thirds planted. Thus, the common denominator for the neutral-to-acid tanks is large amounts of rootwood, population near maximum and medium-heavy planting. The common denominator for the neutral-to-alkaline tanks is, um...well...um—nothing!

Are we having fun yet?

You know, I set out on this here little “writing” adventure with the sincere goal of discovering the secrets of stable water, among other things. And you, dear readers, deserve better than what I’ve come up with so far. I really haven’t properly arrived upon a solution to this mess yet, and I apologize for that...

But I truly believe that any failures are directly related to the weirdness of water chemistry (in general) coupled with Washington DC’s wacky water. But I ain’t about to give up! First, Jim Karanikas of Tropical Fish World in Gaithersburg has graciously agreed to be grilled by me on the mysteries of buffering and such—that’s

an "interview" that he's agreed to (for you laypeoples). Second, I've also decided to undertake this task the old fashioned way, and that means "scientifically."

Right now, as I write, there are four buckets briskly bubbling in the bowels of the Bat Cave. (Alfred has strict instructions not to touch them). In desperation, this poor back is resorting to "science," but hey, why not?

I've got a "control" bucket and three "subjects" (victims?). Later, there may be more. I am currently subjecting said buckets to vigorous rigors—or is it rigorous vigors??? Never mind that...I'M TESTING THE LIVING DAYLIGHTS OUT OF THEM!!! I purchased an extra air pump specifically for this project. I also bought brand new airline hose and four airstones just so I wouldn't have "contamination". Oh, the dreaded contamination...

Anyhow, I'm going to poke and tweak and thrash and beat them into submission for the next couple weeks, and then...after all of this abuse, I'm going to do the only truly humane thing to do.

I will crash them.

But, most likely, the water will have already crashed by then. Of paramount concern to all, I shall "take notes" and "dutifully record" the entire process. Then, seekers, I shall report back to you. Now, if I could just get my hands on one of those sterile lab coats...

But enough of all this talk about pH! pH this and pH that—I've had it up to here at this point. Since this article is about chemical treatments/additives/etc., what if we talk about some nice things? Here are some things that I've tried that actually work.

Being that phosphate is such a big problem around here, you may want to look into Kent Marine's Phosphate Sponge™. It ain't cheap, but it's a whole lot more attractive than an algae infested tank! Best of all, it's rechargeable; you can get up to four "rounds" out of each batch. There are a number of rechargeable phosphate removers out there, but I like this one because you bake it in the oven to recharge it. Cool...no—I mean—hot! I like to get two medium mesh nylon bags, stuff them into my "travelling" Fluval 3 internal filter, and let it run for 24 to 48 hours. That's it!

Earlier, we were discussing the perils of activated charcoal. What is quickly becoming one of the most popular alternatives is Purigen™ by Seachem. It's a synthetic remover of ammonia, nitrites and nitrates. It, too is rechargeable, but it's not nearly as easy as popping it in the oven. There are several steps involved, and whatever you do, don't leave it in your handy-dandy nylon bag during the process. According to PVAS's prez, the bag will melt.

Another perennial favorite that is widely available is Aquarium Pharmaceutical's Nitra-Zorb™. If you're after only nitrates, it'll do the trick. And it's easier, and cheaper, to recharge than Purigen. All it needs is some sea salt for recharging. Which brings me to the next subject.

I gotta' warn you, this particular topic makes me hoppin' mad!

I am a regular reader of the British aquatic magazine, *Practical Fishkeeping*. Twice in the past year I've found, buried in their articles, clear warnings about products that can be recharged. Basically, it is this: whatever "agent" that is used for recharging a product should not be present in your tank. Huh? What? O.K., O.K., here's an example.

I was regularly using Nitra-Zorb in tanks that also contained very small amounts of sea salt. At one tablespoon per five gallons, this isn't even near a brackish water tank, but *there was salt in there*. Well, since salt is the recharging agent, that Nitra-Zorb was probably kicking out those little nitrate guys just as fast as it could bind them in! And I couldn't figure out why such a highly recommended product as Nitra-Zorb wasn't doing a bang up job of removing my nitrates!!??

Do you *think* there's a warning on the label? I don't think so.

It does say "For Freshwater Use Only" but, jumpin' Julies!! There's a whole lot of freshwater folks out there that add some salt as a homeopathic remedy. In my particular case, my babies (spiney eels) like just a little salt, so...

Once one thinks about it, it's obvious. "Hmm, lemme' see. This here salt takes nitrates out, and here I am placing this bag in my tank which has salt in it. Hmmm..."

But I didn't think about it, and I'll bet you my favorite clown loach that there are *thousands* that haven't thought about it either. Let me make it clear that there are a whole lot of rechargeable products out there by many different manufacturers—I've only tried a few. But I'll bet you my second favorite clown loach that *most* of these products don't have warnings...and I haven't seen anything on this disgrace in American aquatic pubs either.

You know, this is truly sad. I really wanted to end this on a bright note!

How about this? Recent research (I've been reading a lot), is leading me to believe that those who keep true aquatic gardens may not need ANY FILTERS AT ALL!!! Nada.

But that's a topic for another time—maybe next year. Right now, I've got some homework to do...

Every "WaterWorks" article will contain this little (little?) "disclaimer." It's important that it be understood that, though I have done extensive research, I am not offering myself up as an "expert" in this field. Unless otherwise noted, any information is thought to be that which the MAJORITY of aquarists believe to be true. I have found that for every person who says, "Do it this way," there is someone who comes along and says, "I've always done it the other way." I've encountered this phenomenon at every step—some memorable "aquatic contradictions" will be noted throughout the series. A few ideas and suggestions will be from my own experience. If you read between the lines, they'll be easy to spot.

It should also be duly noted that I'm not going to get too technical. I'm keeping it simple on purpose. If you want to get to the real nitty gritty, hop on the web—or buy some books.

Furthermore, in order to ensure that skeptics, cynics (and attorneys) across the land sleep better at night, let me emphatically state that I have absolutely no connection whatsoever with any manufacturer, distributor, et al. If I appear to have any biases (for or against), it is because I tried, or you tried, a product, and we either liked it or found it to be less than satisfactory. These articles are simply one man's search for the truth (and algae-free tanks)...proceed with caution; do your research; your results may vary; shake before using; take two aspirin and call me in the morning; and finally, and even more emphatically, "IF IT AIN'T BROKE, DON'T FIX

W A T E R W O R K S T W O

November 1, 1997
POTOMAC VALLEY AQUARIUM SOCIETY
FREE
FALL WORKSHOP

HOWARD JOHNSON HOTEL, 5821 Richmond Hgwy (Rt. 1),
Alexandria, Va (rt 1 south off of rt. 495). Workshop begins 10:30 a.m.
Admission is FREE to the public.

Speakers: in order of appearance:

Jim Karanikas - Rainbows. Jim is the owner of Tropical Fish World in Gaithersburg, Md. and is well known locally as an authority on Rainbowfishes (as well as other subjects). Jim will be presenting a video made at the recent Rainbowfish convention in California followed by a discussion.

John Mangan - Livebearers. John is vice-chairman of the American Livebearer Association as well as editor of the A.I.A journal *Livebearers*. John will give an overview of livebearers and their care from the common guppy to the bizarre blind cave Ophiodid, and everything in between (halfbeaks, *Anableps*, stingrays, etc.).

Dr. Wayne Leibel - South American Cichlids. Dr. Leibel is a member of the American Cichlid Association, past editor of *Buntbarsche Bulletin*, and a well known authority on South American Cichlids. His articles appear frequently in TFH, FAMA, and Aquarium Fish Monthly. His presentation will be a survey of South American Cichlids, with strategies for raising and breeding.

Rusty Wessel - Collecting in Belize. Rusty is also a well known member of the American Cichlid Association and has served it in many positions. His main interest is Central American Cichlids and this has led to many trips throughout the region to observe and collect fishes. His presentation will be on his recent collecting trip to Belize.

Alex Townsend - Killifish. Alex is a member of the Chesapeake Area Killifish Association as well as past president of PVAS. He is a very accomplished aquarist who works with many rare and hard to keep fishes. His presentation will be an overview of Killifish and their care and breeding.

Banquet: 7:00 p.m. featuring Dr. Wayne Leibel - History of the Cichlid Hobby. Cost: PVAS Members - \$15, Non-members - \$20. Buffet dinner - salads, choice of entrees, deserts, coffee, tea, etc. There will also be a cash bar from 6 - 7 p.m.

November 2, 1997

POTOMAC VALLEY AQUARIUM SOCIETY

AUCTION!

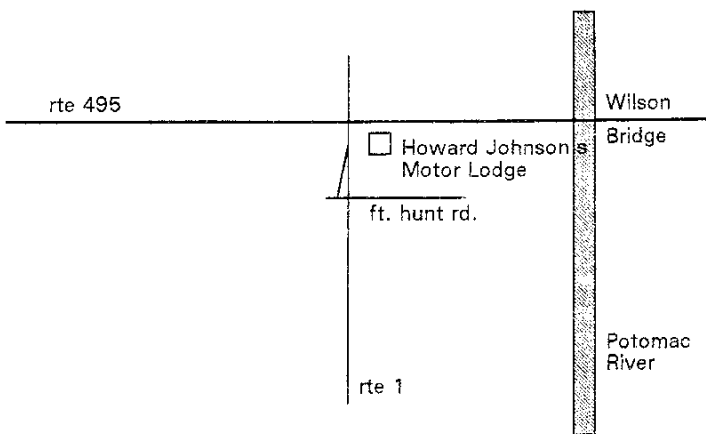
TROPICAL FISH AND EQUIPMENT

HOWARD JOHNSON HOTEL, 5821 Richmond Highway, Alexandria,
VA. (route 1 at the beltway).

A great opportunity to buy-sell fish, plants, aquariums, books, equipment, supplies...
We will also hold a raffle for new equipment and supplies!

Registration 9 am - 12 noon

The auction will begin at 11 am !



Directions: Howard Johnson's is located on the east side of rte 1 just south of rte 495 and north of Fort Hunt Rd. Exit rte 495 onto rte 1 south. Howard Johnson's is located on the other side of the divided highway. Follow the signs for Ft. Hunt Rd., then turn back onto rte.1 heading north.

POTOMAC VALLEY AQUARIUM SOCIETY AUCTION RULES

RULES FOR THE SELLER

1. You do not need to be a PVAS member to buy or sell hobby-related items, including fish, plants, equipment, etc. in the auction.
2. Registration of items for sale will begin at 9 AM and will end at 12 PM. Auctioning will begin at 11 AM. Items arriving after 11 AM may not be placed on the tables until after the first break. You must be in line by 12 PM to register.
3. All items must be labeled with the identity of their contents, to include: number, sex (if possible), and other pertinent data. Use a waterproof marking pen and adhesive label. Labeling equipment will be available at the auction site, but items must be labeled before being registered.

Fish "Pair" means one of each sex. "Mated Pair" means a pair that have spawned with each other. "Trio" means one male and two females. "Reverse trio" means two males and one female. "Mixed sexes" means at least one of each sex is present. If you are not certain label "unsexed". Any major flaws should also be mentioned. PVAS reserves the right to reject any fish judged as unsuitable for auction.

Supplies: All equipment **MUST** be labeled as to working condition, missing parts, and any other pertinent data. PVAS reserves the right to reject any item judged as unsuitable for auction.

4. **Proper fish bags must be used.** Live items must be bagged with ample air and water (don't overfill the bag with water, leave plenty of air space also). Make sure the bag is of a suitable size for the fish in it. Do not overcrowd fish. More than one bag may be joined together as one item if necessary. Fish packed in ziploc or similar bags will not be registered. If a fish is registered in a bucket, tank, bowl, etc. the container will be considered part of the item and they will be auctioned as a unit. PVAS reserves the right to reject any improperly packed item and to re-bag any item if necessary.
5. Registration is limited to 15 items per person. A limit of 5 bags per species or color variety or form is allowed unless prior approval is obtained from the auction chairman.
6. **RULE CHANGE!!** Each item to be auctioned will receive a label with a seller number and an item number. The item number will indicate in which order the items will be sold. ie. all #1 items (ex. 1-1, 2-1,3-1 etc.) will be sold then all #2 (1-2, 2-2, 3-2 etc) then #3 etc. thru 15.

7. Items will be offered as is and will be sold as one item. Once registered, the contents of an item may not be split.
8. Each item carries a \$1.00 minimum bid, unless the seller assigns a higher minimum (make sure to include the minimum on your label if it is higher than \$1). The seller may lower the minimum on an item that does not sell. Items that do not sell will be set aside and offered again at the very end of the auction.
9. No payment will be made to the seller on the day of the auction. Payment will be forwarded by mail within ten days after the auction date. It is the sellers responsibility to give PVAS a proper name and address to receive payment. Envelopes for this purpose will be filled out during registration.
10. The seller will receive two-thirds of the selling price. PVAS retains one-third.
11. All items not sold must be claimed at the close of the auction, or they will be disposed of at the discretion of the auction chairman.
12. The auctioneer retains the right to set aside any improperly bagged or marked item, or any sick or otherwise unsaleable item.
13. Fish species that are restricted by either federal or state statues will not be accepted.

RULES FOR THE BIDDER

1. All persons wishing to participate in bidding are required to register with their full name and address. Bidding numbers will be assigned to all buyers.
2. Items may be inspected only before the auction and during breaks.
3. Bidding raises will be in \$1.00 increments. The auctioneer has the right to alter this on an item at his discretion.
4. Successful bidders will have their items brought to them at which time payment is expected. An authorized bidder may run a tab or pay by check. See the treasurer before the auction. Proper identification will be required in these instances.
5. **All sales are final.**
6. In all cases the decision of the auctioneer is final.

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.

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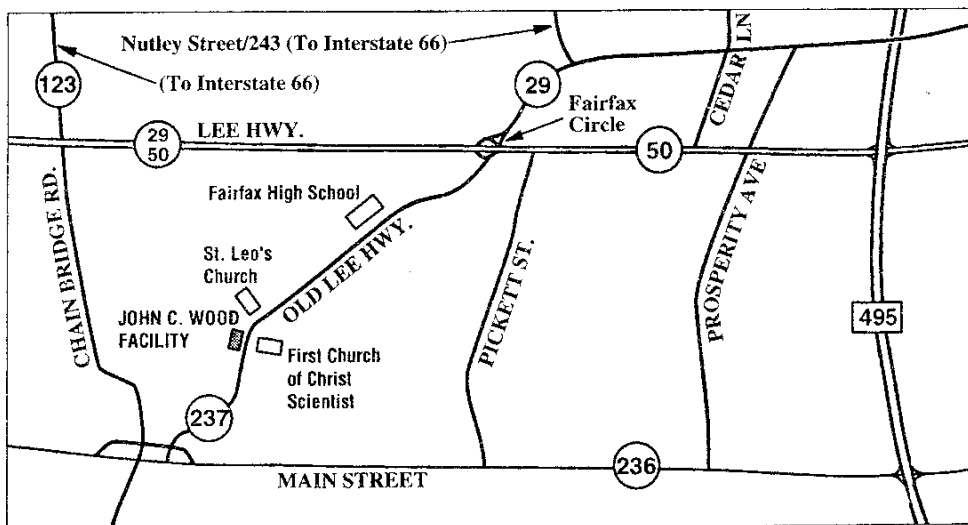
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Support your local independent pet shop. Our hobby can't continue to grow and thrive without them.

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, Virginia. We meet in room 6, which is located behind the police station. Doors open at 7:30 and meetings start at 8:00—EVERYONE IS WELCOME!