

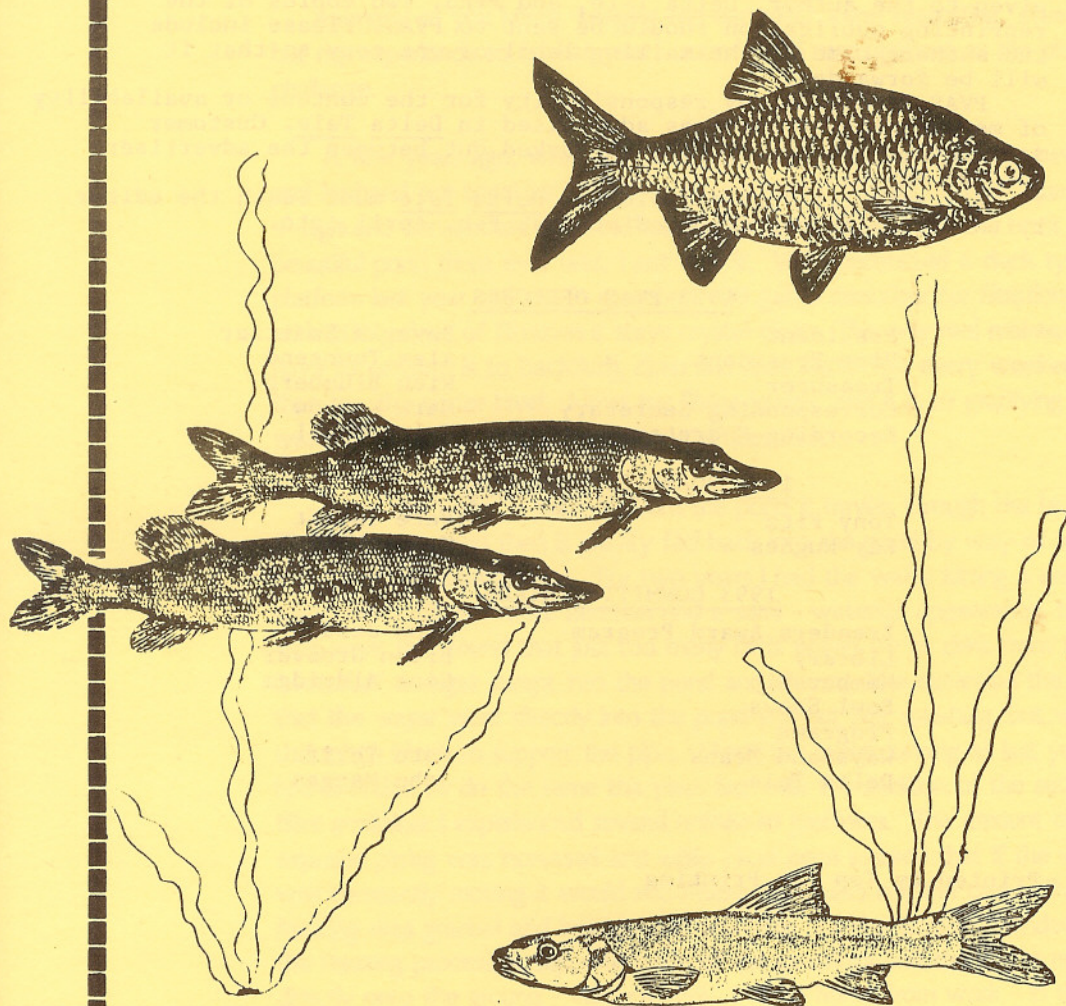
# \*DELTA TALE\*

MAY/JUNE

1993

OFFICIAL PUBLICATION OF

potomac valley aquarium society





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 PO Box 6219 Shirlington Station, Arlington, VA 22206.

Original articles and artwork appearing in Delta Tale may be reprinted by other non-profit organizations if credit is given to the author, Delta Tale, and PVAS. Two copies of the reprinting publication should be sent to PVAS. Please include the authors name on the mailing label of one copy so that it will be forwarded.

PVAS disclaims any responsibility for the content or availability of merchandise or services advertised in Delta Tale. Customer satisfaction is a matter to be worked out between the advertiser and the buyer.

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

#### 1993 PVAS OFFICERS

President	Beverle Sweitzer
Vice President	Alex Townsend
Treasurer	Rich Blumberg
Corresponding Secretary	Mark Kaprow
Recording Secretary	Julie Spall

#### 1993 BOARD OF GOVERNORS

Tony Fitz	Pete Thrift
Ray Hughes	Kenny Warren

#### 1993 COMMITTEE HEADS

Breeders Award Program	John Jessup
Library	Brian Groover
Membership	Gene Aldridge
Bowl Shows	
Programs	
Ways and Means	Pete Thrift
Delta Tale	John Mangan

Printed by Top Cat Printing

## Letter From The Prez:

Hi Guys:

As many of you know, keeping fish can offer some interesting situations, but my experience so far has year - round pond management as the ultimate challenge.

A few years ago, when the "little Koï" stopped being 'little', my two sons and husband put together an above ground "pond" for me. It is 8' square and 4' high and constructed from old railroad ties. While it is not the most beautiful pond there ever was, I just love it. We constructed a deck type platform last year and put in a second 100 gallon container for filtration and with 200 gallons of filtration it stays crystal clear. The only real maintenance I have to perform is to backflush, drain and rinse each filter every weekend and then top the water level. I love my "living jewels" and it is so gratifying to watch them grow from fingerlings to 14" beauties.

After the water is pumped from the pond it travels through the lava rock filled containers and then is gravity fed back into the pond by way of a 3" PVC overflow arrangement. For two years I had the water hitting a cement splash block to give more aeration and a semi - waterfall appearance, but as time went by I found that just too many birds would try to drink from the "waterfall" and get swept into the pond and drown. We extended the pipe so that the water went directly into the pond without first splashing, but we kept the splash block to support the pipe. I kept the pump running all last year and had intended to do the same this year, but with the addition of the second filter container I experienced several unforeseen problems. The amount of exposed piping was increased and while I had been assured that if the water was constantly moving it would not freeze, such was not the case. The freezing was gradual and invisible until too late. As the water expanded during the freezing process, it separated one of the couplings and the water pumped directly onto the ground - very rapidly!! I came home from work - in the dark and cold - to find my pond with about 8" of water in one end. Thank God for the slope or my babies would have been dried out! The splash block had fallen into the pond and that is when I found out that my boots leak. I had to climb down in to get the block. I forgot to mention that we had a float



There's a bunch o' interesting stuff in this issue for you. Spring is here, sort of, and its time to start thinking about outdoor ponds. Our favorite author, George White, has written an article that should help you get started. (Well, maybe he's not our favorite author, but he's our favorite author on aquarium subjects). Also in this issue is part 2 of Alex Townsends' fascinating article on his experiences in the Philapene jungle. Even better than the first part. If you missed our last meeting you missed seeing Alex's slides from this trip. (You know, George isn't really our favorite aquarium subject author, but he is our favorite

author on aquarium subjects in the Delta Tale.) Something kind of different that is in this issue is part one of Jesse Torgerson's fishy version of Dante's Inferno, wherein the author journeys through the various circles of Hell and observes the punishments given to those who abused their fish. See anyone you know in it? Yourself maybe? (Now that I think about it George isn't really our favorite author on aquarium subjects in the Delta Tale, but he definitely is our favorite author on aquarium subjects in the Delta Tale named George that keeps cichlids and lives in another country.)

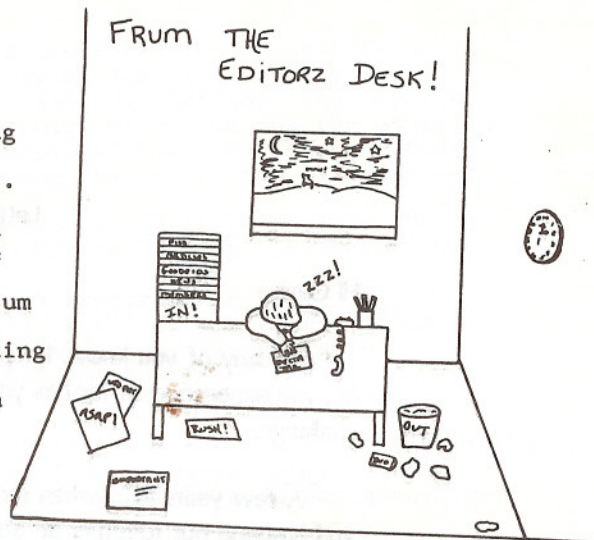
Spring also means the PVAS Spring Auction isn't far away. All of the details can be found in this issue. As is traditional I'll waste space by saying: use proper fish bags- no ziploc bags, go buy some from your local pet shop the right size, they don't cost much; don't bring junk- if it doesn't work throw it away, ask yourself "would I buy this?". Although that's probably the wrong question since you did buy it. Ask "would someone with any sense buy this?".

Be sure to check out the PVAS hotline for all the latest info. We've had some good programs the last couple of months- Gerry Hoffman, our favorite speaker (now don't start that again), on corydoras; and last month Alex Townsend and Tom Biery on the Philapenes. We have even more lined up for the future. Don't miss next months speaker who will tell you all about a collecting trip that included the rediscovery of a fish "lost" to science and the hobby for 30 years (really).

Finally- apologies to George White. George is probably our most prolific author and without him many issues of Delta Tale would have been pretty thin. He knows I'm just kidding (I hope) and he really is our favorite author on aquarium subjects in the Delta Tale named George...

Until next time...

*John*





## What's Happening!

For up to the minute information on "what's happening" call the PVAS hotline at 703-352-3365 24 hrs. a day.

- May 10: PVAS Monthly Meeting. This months speaker will be John Mangan, speaking on his recent collecting trip to Mexico. Also- the usual door prize, raffles, mini-auction and more. Doors open at 7:30, meeting starts at 8:00. Everyone is welcome. Free "mexican" gift for anyone wearing a sombrero.
- May 23: PVAS Spring Auction: registration to sell 9 til noon. auction begins at 11:00 am. Howard Johnson Hotel, near intersection of route 1 and 495. Complete rules, map, directions, etc. can be found in this issue.
- June 14: PVAS Monthly Meeting. Speaker not known at press time. Call the hotline in early June to find out. The usual stuff- door prize, raffles, mini-auction, refreshments...
- July 12: PVAS Monthly Meeting. This months speaker will be Dr. David Allison of the Center for Marine Conservation, speaking on Aquatic Conservation. A subject we all need to learn and do more about. Be there.
- Watch this space, and listen to the hotline, for information on our Fall Auction & Workshop in Oct.



PVAS members may advertise in the Trading Post at no charge. Send ads to Delta Tale c/o John Mangan, 9770 Oleander Ave. Vienna, Va, 22181. Deadline for the next issue is June 14.

**FOR SALE:** Perfecto 65 gal tank, wooden lowboy stand, glass canopy, fluorescent strip light (Triton bulb). Tank is heavy plate glass and can be drilled. Everything is in new condition. \$165. Set-up with Eheim 2215 canister filter - \$225. Delivery possible.  
Pete Thrift - 703 971-0594 after 6PM



switch attached, but apparently they don't live forever and this one was dead.

Since the outside faucet was frozen we had to use the kitchen faucet which has much less pressure and it was the wee hours of the morning before the pond was full and running again.

About 3 weeks later the top of the pond was almost completely frozen over and this time the freezing took place from the exit point of the pipe. It was really find of weird. The opening just got smaller and smaller until it was completely closed and then the pressure blew the joints again. Luckily this time someone was home and noticed the "ice palace" forming in the yard and I rushed home from work and spent the rest of the day filling the pond again. When the water level dropped, the ice covering stayed in place and you could look down through the hole made by the heater and see the fish swimming under this beautiful white roof. Luckily the water was a couple of feet deep by the time the ice crashed to the surface.

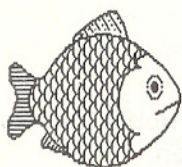
After this we turned the pump off until the danger of freezing was over. I really hated not having the water circulating and I can tell you that the fish hated it too. The surface being broken gives them a sense of security and they were very unhappy until we could turn the pump back on.

I had thought that except for the time and inconvenience I had gotten off pretty light, but apparently one of the fish had gotten hit when the splash block fell into the pond because in a couple of days he was laying on his side on the bottom. I pulled him out but he wasn't dead yet. As hope springs eternal I kept watching and praying that he would get better, but all that really happened was that his lowered, winter metabolism kept him alive about a week longer. He was a beautiful Bristol Shibunkin that I got at my first auction and he was the daddy of all my baby Shibunkins. I put him in the freezer and we will have a nice funeral when the weather clears.

The point of all of this is to make it pretty clear that you can almost never be ready<sup>for</sup> everything, and that if anything can go wrong it will and usually when it is the darkest and coldest that it can get.

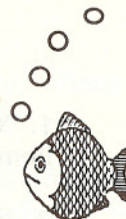


THE POTOMAC VALLEY AQUARIUM SOCIETY



# AUCTION!

*Tropical Fish and Equipment*



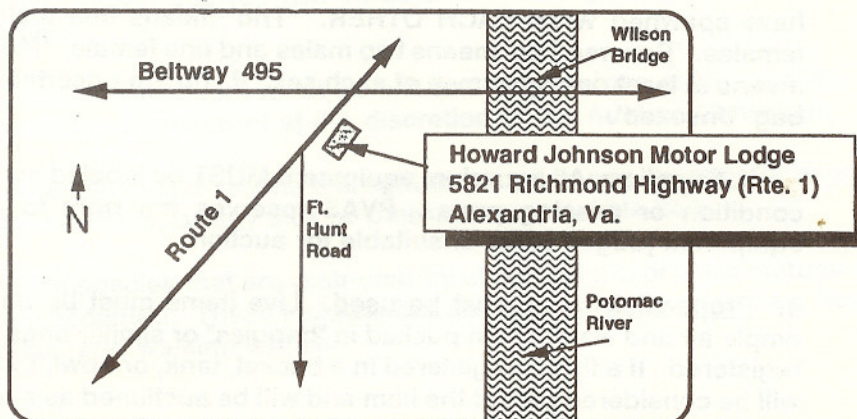
at the HOWARD JOHNSON HOTEL, 5821 Richmond Highway,  
Alexandria, Va. (*Route 1 at the Beltway*).

*A great opportunity to buy-sell fish, plants, aquariums, books, equipment and 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:**

The Howard Johnson's is located on the east side of Route 1 just south of the Capital Beltway (495) and north of Fort Hunt Road. Exit the Beltway onto Route 1 south. Since the HoJo's is located on the other side of the divided highway, follow the signs for Fort Hunt Road, then turn back onto Route 1 heading north. This will put you in front of the Hotel.



## **PVAS AUCTION - SUNDAY, 23 MAY**

### **RULES FOR THE SELLER:**

1. You do not have 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 promptly at 12:30 PM on Sunday, 23 May.
3. All items must be labeled with the identity of their contents, to include number, sex (if possible), and other pertinent data. Use a permanent marking pen and adhesive label. Labeling equipment will be available at the auction, but labeling must be accomplished before the items will be registered.
  - a. 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 specimen of each sex. If you are uncertain, label the bag 'Unsexed'.
  - b. Supplies: All aquarium equipment **MUST** be labeled as to working condition or missing parts. PVAS reserves the right to reject any equipment judged to be unsuitable for auction.
4. Proper fish bags must be used. Live items must be bagged with ample air and water. Fish packed in "baggies" or similar bags will not be registered. If a fish is registered in a bucket, tank, or bowl, the container will be considered part of the item and will be auctioned as a unit. There will be a supply of fish bags for sale at the registration desk. After registration, the Auction Committee reserves the right to re-bag any item as is necessary.
5. Registration is limited to fifteen (15) items per person.
6. A limit of five (5) bags per species or color form/variety is allowed,

unless prior approval is obtained from the Auction Chairman.

7. Each item label will have a colored dot affixed to it to govern when the item will be auctioned. Those items with a red dot will be auctioned first. Each seller is entitled to one red dot for each four items registered. The auction order for the other colors (blue, green, yellow) is announced at the start of the auction.

8. Bags will be offered 'as is' and will be sold as one item. Once registered, the contents of a bag may not be split.

9. Each item carries a \$1.00 minimum, unless the seller assigns a higher minimum. The seller may lower the minimum on an item that does not sell during the auction.

10. 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 seller's responsibility to give PVAS a proper name and address to receive payment. Envelopes for this purpose will be filled out during registration.

11. The seller receives two-thirds of the selling price. PVAS retains one-third.

12. 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.

13. The auctioneer retains the right to set aside any improperly bagged or marked item, or any sick or otherwise unsaleable item.

14. Fish species that are restricted by either federal or state statues will not be accepted. These include, but are not limited to: piranhas, Texas cichlids, and walking catfish.

#### **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.



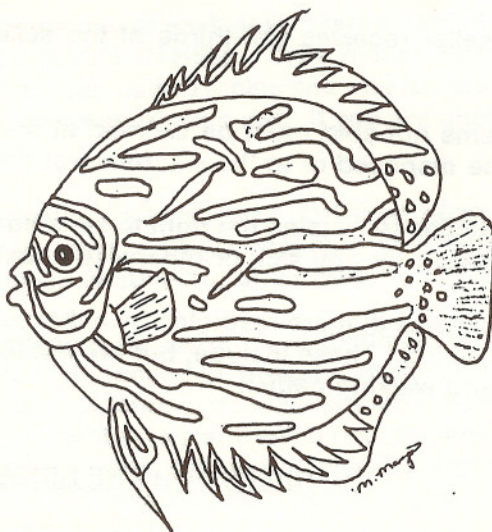
2. Items may be inspected only before the auction and during the intermissions.

3. All bidding raises will be in one dollar (\$1.00) increments. The auctioneer has the right to alter this procedure 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. Please 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.



## NATURAL AQUATIC ENVIRONMENTS

by George White, PVAS

Now is a fine time to plan your yard and garden. Taking care of the yard can be one of life's biggest pleasures--if you know how to go about it properly. And, you can make your spouse very happy. The grass, trees, and shrubs are the least important. What counts are the fish! A carefully planned yard decorating scheme can include several mini-ponds or tastefully laid-out barrels or other containers for cultivating fish. (Incidentally, such a decorator arrangement provides excellent cover for secretly cultivating live fish foods such as the mosquito larva suggested by Mr.. Anonymous in a Delta Tale article about a year ago. (The gist of his article was that if you let a body of water stand undisturbed, the mother mosquitoes will find it and lay eggs for you. You net larva out to feed your fish whenever you please. Any accidental escapees are not a problem--they are potential future mothers.)

The key to all of this is careful planning to avoid making your yard look cluttered. (And, if there are small children nearby, be sure it is safe.) A number of inexpensive items available at hardware and gardening supply stores can be used to create lovely "ponds" or a series of ponds. Flowers and other decorative plants placed around the water containers add a touch of class.

There are many things you can convert into "ponds" with a little imagination. For examples, four sets of items that can be used in decorating your yard are:

1. You can order a fancy and interestingly shaped pond, a reliable pond pump(s) and filter(s) from one of the local aquarium shops. This can be the centerpiece of your fine yard decorative layout. A local aquarium shop can also provide you with excellent advice on managing a pond. This club bulletin often publishes the names of local shops that cooperate with us on club shows and other events. One of these stores would be a good place to start.

2. Sawed-off wooden whiskey barrels can provide imaginative and lovely mini-habitats. These are sometimes available at gardening shops or from special garden supply catalogs. Unless the fish you might keep in them like acidic water (and a touch of whiskey?), the barrels should be lined with heavy duty garden trash bags or a commercial pond liner like the ones from Tetra. First, put the bag or liner in the barrel, then fill it about halfway with water. Wrap the edges of the bag over the side of the barrel. Tie it down with a nice looking rope, preferably marine quality. If necessary, trim off the excess of the bag hanging down over the side of the barrel below the rope.



3. A series of small ponds can be made using cement mixing tubs, which are usually 2 x 3 or 3 x 3 feet and are available from hardware or construction supply stores. These trays come in a variety of sizes, are sturdy and are usually brown or dark green. They can be buried partially in the ground and surrounded with flat or other nice rocks. A friend in Germany created a real masterpiece using a number of these tubs to form a cascading stream 15 feet (3 meters) long. His yard sloped slightly and he built up mounds of rock and soil to further elevate several of the tubs. Rocks and carefully chosen plants along the edge made his "stream" a wonderful addition to his yard. A hidden pond pump and water feeder line kept the water flowing. As you might have guessed, the fish he kept in his stream were running water species similar to American darters. But, any number of species would have flourished there.

4. If you really want to be creative and plan to keep your pond or ponds for a long time, you could consider using a commercial pond liner like the ones from Tetra. These can be shaped to fit into irregular or fancy ponds or streams you have dug into your yard. These should be lined along the edge with rocks to keep them in place.

Many species of fish benefit from a summer vacation in the great outdoors (assuming that the ponds are relatively safe from cats, raccoons and other potential piscavores.) Some species take on their best natural colors when kept outside. One adventure is to release the fry of colorful, fast growing species such as Killifish or Cichlids in the spring and bring them back inside in the fall. It can be interesting to compare them with similar age fish kept inside during the spring and summer.

A large pond may also provide adequate space for some species to display more of their natural behavioral patterns than they can in an aquarium. One interesting idea is to set up a community of highly territorial fish such as some of the small Central American Cichlids. Their political wrangling over territories and rocks can be fun to observe. (Fish are my favorite "politicians.")

In summary, these do-it-yourself outdoors streams and ponds provide excellent opportunities for creative gardening. Some very interesting plants can be obtained from aquatic garden specialists such as Lilly Ponds in Lillyponds, Maryland, or ordered through your local aquarium store. Your fish will love the natural touch. And, the plants will add credibility to the stories you tell your spouse, parents, landlord, neighbors, or other interested parties about your efforts to spruce up your yard.

## A Summer on a Jungle River (Part 2)

Alex Townsend, PVAS

### The Spider and the Wasp

This probably sounds like the title of a fable or parable, but it's actually a description of an event I witnessed one afternoon inside Sohoton Cave. As most people know, archaeologists generally excavate a site within the confines of a carefully measured grid, selecting only certain grid units, or squares, for excavation. I was in the early stages of excavating one such grid square, concentrating on delimiting one strata of deposition from the next, when I suddenly found myself sharing the square with the largest spider I have ever seen in my life. Actually, "sharing" is the wrong word -- the spider literally jumped into one side of the shallow hole and I jumped just as quickly out the other. Not that I suffer from arachnophobia, but the span of this spider's legs would easily have covered the palm of my hand (and they weren't skinny legs!). Clearly, though, something was wrong. This spider wasn't so much running toward me as he was from something else -- there was something in his movement that communicated a palpable fear.

The spider never made it across the square. Just as I sensed that he was fleeing from something, that "something" (in the form of a large iridescent dark blue wasp) landed on one edge of the square. Probably realizing that it could run no farther, the spider froze. The wasp took to the air, hovered briefly above the spider, and attacked. The spider, despite its greater size, was no match for the wasp who, now firmly attached to the spider's back, quickly injected its lethal venom. And then things began to get interesting.

As you can imagine, my respect for that wasp had just grown enormously. But I was even more impressed by what happened next. As soon as it was certain of its kill, the wasp began what seemed like a ritual of sorts. Standing on the ground a few inches from its prey, it repeatedly lowered its head in several directions, each time raising its posterior, spreading its wings slightly, and emitting a loud and peculiar noise that was a combination of a buzz and a rattle. After completing this "victory dance," the wasp then grasped one of the spider's now clenched legs and began dragging the carcass across and, with great effort, up the side of the square to the floor of the cave.

With its prize now out of the pit, the wasp began slowly dragging the spider toward the side of the cave, a distance of about twenty feet. I moved closer to get a better view and quickly learned the meaning of that peculiar noise the wasp had made just after its kill. Scurrying to assume a position between the spider and myself, the wasp repeated its tail-up, head-down performance and this time its buzzing rattle translated clearly as "Back off! This one is MINE!" Several times I tested the



wasp's definition of encroachment and, whenever I came within about five feet, was given another stern warning. I found it interesting that the wasp never left the ground after it killed the spider.

Eventually, the spider was dragged into a tiny crevice at the side of the cave, from which the wasp emerged only a few minutes later. This, however, was not the wasp's burrow (I knew from earlier sightings where the wasp made its home), nor did I ever again notice the wasp entering or leaving the crevice. My assumption is that the spider may not have been a meal for the wasp at all, but perhaps a receptacle for her(?) eggs which, when they hatched, would feast upon the spider. But this is only a guess.

### The Flood

The Basey River, which flowed lazily past our cabin at Panhologan, was essential to much that we did that summer. We swam and bathed in the river, we used it as a source for drinking water, and of course we used the river for transportation. We became very comfortable with the river during the first weeks of our stay. Most of all, the river just seemed to set the pulse of daily activities. But somewhere toward the middle of the summer we were witness to, and nearly became victims of, another side to the river's personality. The contrast between the river we thought we knew, and the transmogrification wrought by a huge monsoon storm was unbelievable.

First, of course, was the rain...lots of rain. We awoke one morning to a torrential downpour, the type of rain uniquely associated with the tropics. It didn't form puddles on the ground, but instead gave rise to myriad little rivulets, intertwining, eventually pouring into the river. This downpour lasted throughout the day and through the night. When the lantern was extinguished late that night, the river was running a bit higher and faster than normal, but there certainly was nothing to suggest cause for alarm. A few of us joked about sleeping with one arm dangling out a window so we could sound an alarm if the water threatened the cabin, but these comments were laughed aside and none of us had any trouble falling asleep.

I awoke earlier than usual the next morning, not because of the sound of the rain on the cabin's tin roof (which actually was soothing after awhile), but because another sound, more ominous, had taken its place. What I heard, above the sounds of wind and rain, was a dull roar. Thinking that perhaps the river was running even faster, I pulled myself up from the floor to the window sill and stared in disbelief at a rushing torrent of water that had risen to within about five or six feet of the cabin floor. Altogether, the river had risen about twenty feet above its normal level since the start of the storm and almost all of that had occurred during the night. Within minutes we were up and dressed and began packing the most valuable equipment,

documents, and artifacts.

It became clear as we packed that the river was still rising. One after another, more landmarks disappeared beneath the churning water. In the time remaining, we hurriedly rigged safety lines from the largest trees to the mouth of Panhologan Cave, spanning a low area between the cabin and the cave that now had itself become a rising stream. As I recall, we managed to get most of our equipment and belongings across to the cave before the rising water made passage impossible. Each of us was completely drenched, of course, and the last couple of trips were possible only by holding tightly to the safety lines as the water swirled above our waists.

We spent much of the next several hours standing in the mouth of the cave, staring across the gorge as the water continued to rise, fearful that we might have to abandon even the cave and crawl up the one accessible embankment. At mid-morning, however, the river reached its highest point -- just inches below the bottom of the cabin and, coincidentally, the entrance to the cave. It was a strange sight, watching the water sweep smoothly through the trees and beneath our cabin while, just beyond, the water churned and rushed in a mad torrent far above the normal course of the river.

As the flood reached its maximum strength, the sound of the water crashing through the gorge became a deafening roar. Standing just outside the cave, shoulder to shoulder, communication was possible only by shouting as loudly as we could. All sound was quickly drowned in the roar that surrounded us. Entire trees, uprooted somewhere upstream and swept into the Panhologan gorge, for example, were routinely smashed against a jutting cliff on the far side of the gorge with only a few faint cracking sounds able to penetrate the roaring of the flood. There was, however, one exception -- a very large tree, much larger than the others we saw go past, was carried through the gorge and pinned against the same jutting cliff. At first, the tree simply stopped moving, as if there was a stalemate between wood and rock. But after a few seconds, the tree was pulled beneath the surface and huge grotesque splinters began to burst through the waves. With a sound like a terrible shriek that cut cleanly through the roar, this giant too was torn apart and swept away downstream.

It stopped raining completely in the early afternoon and the floodwaters subsided even more quickly than they had risen. We were able to return to our cabin by the end of the day, but only with a newly acquired wariness of, and respect for, the river.

The next day was actually calm and sunny and, because our assistants were busy repairing damage to their village downstream, we were left to ourselves. Surveying the area surrounding the cabin, which had been swept clean of all debris by the flood, I discovered a tiny pool left by the receding



waters. Lying in the middle of the pool was a large bright blue prawn, about six inches long. The irony was obvious -- a raging flood with the power to uproot and crush huge trees had deposited, apparently unharmed, a shrimp in a tiny temporary pool. I figured the shrimp deserved a ride back to the river.

As if signaling a rebirth of the jungle after the maelstrom of the monsoon, the nights following the flood were literally alive with insect life. Our cabin, spartan as it was, had no screens on the windows and insects were free to attack our Coleman lantern at will. Most amusing were numerous iridescent green beetles, little more than an inch in length, that would come buzzing through the windows at dizzying speed and strike the hot lantern with a loud and fatal "ping." It was nights like these that I came to understand why the cabin had been built with a small gap around the circumference of its two rooms between floor and wall -- when the pile of dead insects became an obstruction, it was simply swept (pushed, really) to the edge of the floor where it disappeared beneath the cabin. I still wonder how many species of insects yet unknown to science were summarily swept off the edge of our cabin floor.

Included amongst the jungle's insect population were examples of both the beautiful and the bizarre. Of the latter, our hands-down favorite was the Coconut Beetle. These shiny black monstrosities, for those who have never seen one, have thick oval bodies perhaps two and one half inches long, matched by three curved and serrated probes of equal length that project forward from the head (one from either side and one from below). They are marvelously adapted to cutting into coconuts, probably otherwise harmless, and one of the most fearsome looking insects one could hope never to meet. We had several of them nailed to one wall of the cabin as "trophies."

But the jungle also held more delightful surprises. One evening, while I was writing at a small makeshift desk, an immense silver moth flew slowly through the open window at my elbow and landed on my shoulder. Measuring perhaps six inches in length with wings patterned in soft iridescent silver, the moth rested for about a minute or so (long enough to pose for some photographs) and then quietly flew back into the night. We never saw another.

Therewith, memories of a summer on a jungle river. Looking back, I think that what I gained that summer, above all else, was an appreciation of the incredible variety of life in a jungle environment -- of so many forms of life interacting with each other and with their physical surroundings in a dynamic, often bewildering, but incredibly beautiful complexity.

ed. note: Mr. Torgerson is a high school student who studied "Dante's Inferno" in his English class. As an assignment for that class students were to write their own version of the Inferno. Jesse chose to write one based on fish keepers. The results are below. J.M.

#### THE INFERNO OF FISH OWNERS

By Jesse Torgerson

One day I was walking along at the Baltimore Aquarium when I looked at the reef tank. I went to the top level so I could see it from the top. Then suddenly the guardrail broke and I hit my head on the side of the aquarium.

When I awoke everything seemed sort of different. I looked down and saw an opening. I swam quickly

towards it but then a stingray darted in front of me. I turned to go around it but it blocked me. I finally

managed to get around it. After that I saw a menacing Lionfish with its sharp poisonous spines erected and

ready to fight. It chased me and I backed away. Then a surgeonfish came along. With stiletto sharp spines. I moved

back, but the surgeonfish pursued me relentlessly relentlessly. I dove down and hid among the corals. Suddenly a figure

motioned to me. I figured out it was a man wearing SCUBA gear. I followed him to the exit I had seen

before. We entered and came to a room with water in it with a gate at the other side. When he took off his mask he looked

vaguely familiar. He told me he had written many books on fish. Then I asked, "Are you Dr. Herbert Axelrod, the great

author of many aquarium books and editor of Tropical Fish Hobbyist."

He said, "We better move on or the surgeon fish will hunt you down. I will lead you to the gates of the hell of fish owners.



## Canto 2

When I woke up I found myself in a  
room. My guide said, "Here we will descend down  
a huge pit." I followed him and the  
pit led to another room he told me, "This is  
the limbo of those who never owned fish.  
I could tell that these people were not suffering  
but they also did not have hope. As we walked  
past the masses of people I noticed  
my next door neighbor, Sam. I said to him  
"Why are you here?" His response  
was I am here because I did not own  
fish therefore I cannot go to the  
heaven of fish owners, but have  
not abused fish therefore I am  
not in the lower levels.  
We are not punished  
but we will be here for eternity.

## Canto 3

After we had passed through the first aquarium  
we descended to the next level. In  
this level there was more pain and suffering  
Below we saw the souls of the sinners  
packed below like sardines. The souls hardly  
had room to breathe. Among the crowd my  
guide pointed out a soul to me, Alex. He  
said, "Alex had many aquariums and he always  
overstocked them. I called to him,  
"Alex, will you speak to me." He told me he had  
lots of aquariums, but he always would put  
a lot of fish in them and then they would grow  
and become even more crowded. He said  
that in some of his aquariums his cichlids  
would kill other fish and each other because  
they did not have enough room to live in.  
He said that also his aquariums got dirty  
very quickly and had to be cleaned very  
often. Even though he lost fish and had  
to clean his aquariums often he never  
changed his ways because he liked having  
a lot of fish. In one of his aquariums  
he had a ten gallon tank with five two  
inch long convicts and a pleco that was  
three inches long. It was a little crowded  
but it was okay, until his convicts  
grew to four inches and started breeding.

Soon he had five three inch convicts, twenty convict fry and one three inch pleco. The next time his pair got ready to spawn they did not have enough room so they killed two of his three inch convicts. After killing two of the convicts they spawned and the first spawning had grown to one inch long and the pleco to four. So now he had three three inch convicts twenty one inch convicts, twenty half inch convicts and one four inch pleco all in a ten gallon aquarium. The water was getting dirty very quickly so it had to be changed very often. But then disaster struck and the power went off; the temperature in the tank dropped to under sixty-five degrees and there was no oxygen. After the power outage only one three inch convict and the pleco lived. So he went to the pet store and bought more fish but that is another story". After his tale we then descended to the next tank.

#### Canto 4

I am in the third aquarium. I see a huge waste filled aquarium with sinners in it. The putrid stench of human waste filled the air. As I walked along the wretched wasteland I said, how have you been lowered to this dismal place. One said to me," We overfed our fish and/or never changed their water. I had a goldfish named Jack in a fish bowl and I fed him four times as much food as he needed. The excess food rotted in the bottom of the bowl making a bad smell. Also the water became slimy and filled with bacteria. Remarkably Jack survived for two years before finally turning his toes up to the daises. But because we subjected our fish to deplorable conditions in which they were surrounded by water with rotting food and wastes with little oxygen now in Hell we must deal with the same conditions. The terrible stench, from the aquarium started to get to me and I swooned.



## Canto 5

This aquarium is filled with a bunch of huge glass bowls; it looks sort of like one of those carnival games with the fish in the

bowls and the ping pong balls. But instead of fish in the bowls there are people in them.

From the water in which we are wading and

behind a bowl emerged a gargantuan tiger oscar. Its body was four feet long its teeth were two inch spikes, it was a terrible monster. The horrible beast came towards us. Then it started to circle around us. I was sure it was going

to consume us. As he got ready to charge at us he lowered his head, flared out his fins and gills and yawned

displaying his awesome fangs and size. But before he could attack us my guide picked up a rock from the lake bed and threw it

at the monster. The stricken beast darted away to safety and we waded on. When we came to one of the bowls I inquired

as to who he was and why he was there.

He said, "My name is Aaron and I along with the others are here because we bought

fish that got too big for our tanks and we did not get them bigger tanks. What happened to me was I bought a cute two inch snakehead.

I put him in a five gallon aquarium.

He grew very quickly and in a month he doubled in size to four inches. A few

months later he was so long that he was only two inches shorter than the tank and could not turn around in it, but still I did nothing.

After a few weeks he died because he did not have enough space. Because we had fish that gradually got too big until

they had no room in life. So in death we are slowly enclosed in these bowls until we almost suffocate. But then the bowl

gets larger again and the process is repeated. When we speak to people the process is stopped but it continues after

they leave. We then proceed to descend to the depths of the inferno

# All The World HATES DLS

DLS (Double Layered Spiral) is a common gas exchange media used in wet-dry filter units. It consists of a layer of closely woven polyester and a structural supporting plastic layer. The layers are then tightly rolled into the shape of a cylinder. This relatively compact media potentially provides a tremendous surface area for gas exchange and sites for nitrifying bacteria to colonize.

A year ago it was the in thing and now it's the pits. It clogs! Is the response that I hear over and over again. The more that I heard these complaints. To my surprise, I found that the problems were not with the DLS, but with other problems within the system.

I have come up with 3 problems (or parameters) that will ultimately cause DLS to clog.

One is an inefficient prefilter. Most prefilters on the market use very open woven material. Some use foam with gigantic pores and some even use DLS itself (both are designed to let water, thus particulate, pass through easily.) The only things that are stopped from entering the DLS roll is that big piece of lettuce that got away from you and your favorite little fish that gets sucked into the overflow occasionally.

This inefficient filtering allows the top layer of the DLS to be bombarded with particulate matter that eventually lodges in the polyester and begins to rot, culturing billions of heterotrophic bacteria whose waste product, by the way, is the brown goop called mulm. As the mulm builds up on the top, the water flow is re-directed. It's desire is now to flow around the poly and not through it.

There are many ways to improve your prefilter. I find that a two inch thick block of foam cut and set on the overflow (in prefilter section) will stop a much larger percentage of particulate material. As it begins to clog (Good Sign!), the level will rise in your skimmer box letting you know it is time to clean it.

The second problem is light. Heterotrophic bacteria thrive in light. These are the bacteria that we saw in the last paragraph that feed on decaying material. Nitrifying bacteria thrive in darkness.

The biological filtration (DLS) area is a fixed quantity. The heterotrophs and the denitrifiers compete for space within the media. When the wet-dry is exposed to light, the heterotrophs have an advantage (especially the surface) to which they colonize, feed on decaying matter, produce mulm, and clog the exposed



surfaces (i.e. - no water flow.) The solution here is get your wet-dry in the dark! Put it in the cabinet or build a box around it.

The third problem is the lack of a protein skimmer. Very simply, a skimmer is like an over-sized riser tube from your undergravel filter. The water in the skimmer is foamed (by air stone or venturi.) As the tiny bubbles rise, they pick up the dissolved organics. The bubbles with the most organics don't pop as easily as the others so they make it to the top of the foam column. As more dirty foam forms underneath, it makes its way into the collecting cup and therefore out of the system.

Frequent water changes will also take care of this problem, but at the price of salt, a skimmer is cheaper in the long run. The skimmer also keeps water quality high between scheduled water changes.

We all have dissolved organics in our tanks. Just look in the end of the tank, see that yellow hue in the water, THAT'S IT. The tank may look clear but you would be amazed what a skimmer will pull out.

Back to DLS. As organics build up in the tank, all forms of bacteria are multiplying due to the double duty. Trying to take care of fish waste and metabolizing the organics that are now present. Again, the waste product mulm is built up and water flow is restricted.

These excess bacteria consume precious oxygen, give off excess carbon dioxide, your pH goes down...the world is not a pretty place.... When we use a protein skimmer and pull out the organics, there is no need for the excess bacteria and the DLS stays clean. A skimmer will keep an undergravel filter from working extra hard. The tank stays cleaner with a higher pH.

I feel that DLS is being blamed for these other problems within the system. I am not saying that DLS is the best filter media on the market. I've already proved it to be temperamental. I am saying that these other issues must be addressed no matter what the media.

Reprinted from *In Depth*, the newsletter of the Tropical Fish Club of Burlington, May 1991

Potomac Valley Aquarium Society Board of Directors Meeting, February 8, 1993

The meeting was called to order at 7:00 PM by President, Beverle Sweitzer. Attendees included: Pete Thrift, Alex Townsend, Kenny Warren, Ray Hughes, John Mangan, Richard Blumberg, Mark Kaspro, and Juliet Spall.

The Treasurer's report and minutes of the January meeting were submitted.

The new "Hot Line" was reviewed, suggestions for improvement were made, and Alex explained the additional costs involved with the new telephone service.

A suggestion was made to send fliers to local shops instead of printing additional Delta Tales at \$.20 per copy – the idea being that costs could be cut by cutting down extra Delta Tales.

Unanimous agreement was reached to send a \$25.00 honorarium to John Bjarney to thank him for his excellent January presentation.

New business:

Tom Biery informed us that the Discus group is looking for a place to hold their annual symposium in the fall. The idea of a joint meeting, combining symposium with our Fall show/auction was discussed. Kenny will look into facilities available in the metropolitan area able to accommodate a large gathering.

The photos below are of our former and current treasurers busily working away on the PVAS tax forms. The photos were taken April 15, 1993, 11:53 p.m.

ERNIE BUD GRACE





# POTOMAC VALLEY AQUARIUM SOCIETY



POST OFFICE BOX 6219 SHIRLINGTON STATION ARLINGTON VIRGINIA 22206

## APPLICATION FOR MEMBERSHIP

Date: \_\_\_\_\_ 19 \_\_\_\_\_

Name: \_\_\_\_\_

Street: \_\_\_\_\_ Apartment: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Telephone H: \_\_\_\_\_ W: \_\_\_\_\_

Occupation: \_\_\_\_\_

Where did you hear about PVAS/get this application? \_\_\_\_\_

Number of tanks: \_\_\_\_\_ Time in hobby \_\_\_\_\_

What can this club do for you? \_\_\_\_\_

What do you want to do for the club? \_\_\_\_\_

Membership dues for the Potomac Valley Aquarium Society are:

Family/Individual: \$12/yr  
Corresponding: \$ 9/yr  
Junior (under 18): \$ 5/yr

Please send application and check for dues to the address above.

## SUPPORTING VIRGINIA SHOPS

### ANNANDALE PET SHOP

7406 Little River Turnpike  
Annandale, VA 22031  
256-2400

### AQUATIC ENHANCEMENTS, INC.

Aquarium Sales/Leasing/Service  
Box 22677  
Alexandria, VA 22304  
(703) 765-4620

### DISCOUNT PET CENTER

Manassas Shopping Center  
9028 Mathis Avenue  
Manassas, VA 22110  
361-7769

### BAILEY'S PET CENTER

Leesburg Pike Plaza  
35217 South Jefferson Street  
Falls Church, VA 22041  
931-1400

### BEACON MALL PET CENTER

Beacon Mall Center  
6776 Richmond Highway  
Alexandria, VA 22306  
660-6100

### NATIONAL PET AND AQUARIUM

Williston Shopping Center  
6168 Arlington Blvd  
Falls Church, VA 22046  
533-7828

### OAKTON PET SHOP

Oakton Center  
Rt 123 & Hunter Mill Road  
Oakton, VA 22124  
281-9622

### PET MART - TYSONS

8417 Old Courthouse Road  
Vienna, VA 22180  
281-8181

### PETS, ETC - ALEXANDRIA

7688-B Richmond Highway  
Alexandria, VA 22306  
768-2200

### PETS, ETC - CHANTILLY

Sully Plaza  
13932 Lee-Jackson Highway  
Chantilly, VA 22021  
378-2777

### PETS, ETC - HERNDON

Stuart Center  
462 Eiden Street  
Herndon, VA 22171  
437-0381

### PETS, ETC - STERLING

Hechinger Jamesway Plaza  
243-C Harry Flood Byrd Hwy  
Sterling, VA 22170  
430-9667

### PETS-N-THINGS

Pan American Center  
3081 Nutley Street  
Fairfax, VA 22031  
573-4400

### SUNSHINE PETS

7395-H Lee Highway  
Falls Church, VA 22042  
573-6946

### TANKS-A-LOT

Lee Center  
6635 Backlick Road  
Springfield, VA 22150  
703-866-1057

### WILSON'S PARROTS & MARINE

Shirley-Edsall Industrial Park  
5605-G General Washington Dr  
Alexandria, VA 22312  
922-7358



## SUPPORTING MARYLAND SHOPS

### ANIMAL EXCHANGE

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

### AQUARIUM CENTER

Liberty Road at Offutt Road  
Randlestown, MD  
301-521-4529

### BROTHERS PETS INC.

13810 Georgia Avenue  
Aspen Hill, MD 20906  
460-4600

### CONGRESSIONAL AQUARIUM

162 Congressional Lane  
Rockville, MD 20852  
881-6182

### FISH FACTORY AQUARIUM

582 North Frederick Avenue  
Gaithersburg, MD 20877  
881-6182

### GLENMONT TROPICALS

12345 Georgia Avenue  
Wheaton, MD 20902  
949-0344

### HOUSE OF TROPICALS

7389F Baltimore-Annapolis Blvd  
Glen Burnie, MD 21061  
301 761-1113

### MARINE CARE SPECIALISTS

15820 Redland Road  
Rockville, MD 20855  
330-0720

### MARYLAND TROPICALS

11229A New Hampshire Avenue  
Silver Spring, MD 20904  
593-1116

### MONTGOMERY TROPICALS

7845-G Airpark Road  
Gaithersburg, MD 20879  
670-0886

### PETLAND

13833 Outlet Drive  
Silver Spring, MD 20904  
762-3505

### PETLAND

5268 Nicholson Lane  
Kensington, MD 20895  
231-5216

### PET MART ROCKVILLE

2230 Veirs Mill Road  
Rockville, MD 20851  
762-3505

### RICK'S FISH & PET SUPPLY

1003J West Patrick Street  
Frederick, MD 21702  
301-694-9664 301-831-6866

### SHOWCASE AQUARIUM

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

### TROPICAL FISH WORLD, INC.

16529 South Frederick Center  
Gaithersburg, MD 20877  
921-0000

### TROPICAL LAGOON

9439 Georgia Avenue  
Silver Spring, MD 20910  
585-6562

POTOMAC VALLEY AQUARIUM SOCIETY  
P.O. Box 6219, Shirlington Station  
Arlington, Virginia 22206-0219

Meetings are held at the John J. Wood Facility, Room 7, 3730 Old Lee Highway (Rt 237),  
Fairfax City, VA. Doors open at 7:30, and the meeting starts at 8PM. ALL ARE  
WELCOME!

