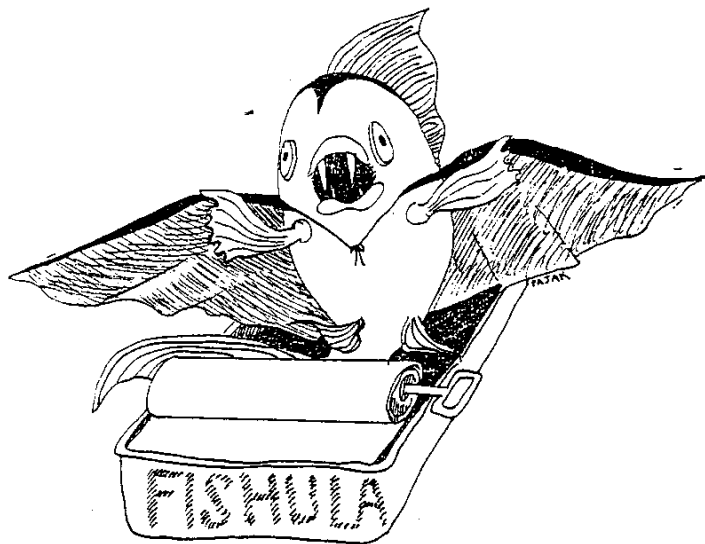


DELTA TALE

Official Publication of the Potomac Valley Aquarium Society

Volume 29 • Number 5

September/October 1998



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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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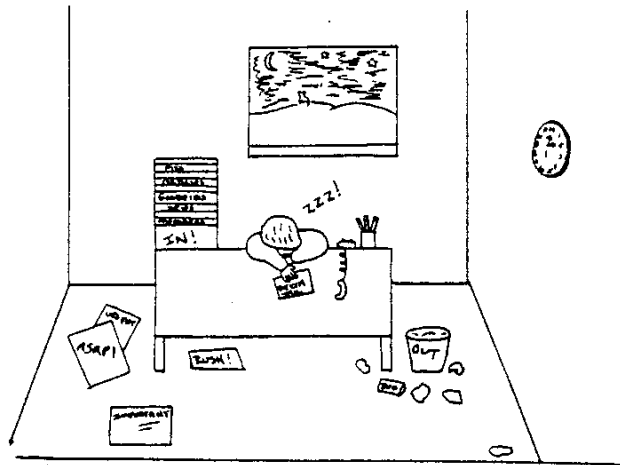
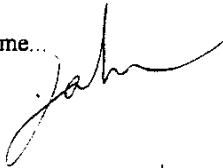
Frum the editor's desk

By the time you receive this the PVAS Fall Workshop and Auction should be just around the corner. We have a great lineup of speakers: Stan Weitzman - Tetras, Lee Finely - *Corydoras* Catfish, Karen Randall - Aquatic plants, and Shane Linder - Asian catfishes. The workshop will take place on Saturday Nov. 7th at the Quality Suites Hotel in Rockville, MD. The workshop is **FREE**. Everyone is welcome, and encouraged, to attend. Saturday night will feature a dinner (registration required - see form elsewhere in this issue) with Lee Finely as the after dinner speaker. Sunday will be another of our huge auctions of fish, plants, supplies, etc. There is no admission charge for the auction and anyone is welcome to buy or sell. Sellers- there is a limit of 15 items per person that may be registered for sale. In addition to all of the above Ray "Kingfish" Lucas will also be present. Ray is a spokesperson for nine different manufacturers and will have a large display of products (which will all be placed into the auction Sunday afternoon).


This should be a great weekend and I strongly encourage everyone to attend.


Are your membership dues overdue? Check the date on your adress label. Sometime in the near future we will be going through the mailing list and taking off who are not up to date. If you need to renew please send a check (dues are \$12/year) to: PVAS, PO Box 664, Merrifield, VA 22116. You can also renew at the Fall Workshop/Auction, or any monthly meeting.

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 www.pvas.com

- Oct. 19:** PVAS Monthly Meeting. Program, bowl show, mini-auction, raffles, door prize, and more.
- Nov. 7 - 8:** PVAS Fall Auction & Workshop. To be held at Quality Suites Hotel, Rockville, MD The **FREE** Workshop (Sat.) will feature Karen Randall (Plants), Ray Lucas (Manufacturers Spokes-man), Lee Finely (*Corydoras* Catfish), Dr. Stan Weitzman (Tetras). Shane Linder (Asian Catfish). The Auction will take place Sunday - registration begins at 9 a.m., the auction starts at 11 a.m.
- Nov. 9** The PVAS Monthly Meeting normally scheduled for this date is **Canceled**. This is due to the meeting date falling the day after the Fall Auction/Workshop weekend.
- Dec. 8:** PVAS Holiday Dinner & Party. PVAS will supply an entree (usually turkey and ham) everyone else is requested to bring a side dish or desert to share. A gift exchange also traditionally takes place. If you bring a small, wrapped, fish related (but not live) gift, you will receive one selected at random in return. **NOTE** - the dinner will start at 7:00 PM instead of our usual meeting starting time. PVAS members are encouraged to bring family or a guest.

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.

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

The Potomac Valley Aquarium Society

Fall Fish Festival!

A weekend of tropical fish fun featuring an outstanding slate of internationally known speakers and our annual fall auction, which has grown to be one of the largest and best in the country!

Saturday and Sunday

Nov. 7th & 8th

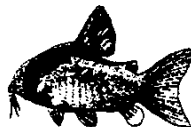
Speakers scheduled to appear include:

Karen Randall - "Aquatic plants."

Lee Finley - "Corydoras catfish."

Stan Weitzman - "Tetras."

Shane Linder - "Asian catfish."



Also joining us will be **Ray "Kingfish" Lucas**, a spokesperson for nine Aquatic Product manufacturers: Aquarian Flake Foods, Aquarium Products, Aquarium Technology Inc., Coralife Energy Savers Inc. Eheim Products, Feller Stone Inc., Mardel Labs Inc., Python Products Inc. and San Francisco Bay Brand Foods, Inc. His products on display will be auctioned during the Sunday auction.

The workshop and auction will be held at the
Quality Suites-Shady Grove

3 Research Court, Rockville, Maryland.

ph. 301-848-0288

DIRECTIONS: From I-270 North, take exit 8, which is Shady Grove Rd. Make a left turn at the light onto Shady Grove Rd. Go two lights and turn left onto Corporate Blvd. The hotel is visible on the left.

The featured speakers will give presentations at different times throughout the day Saturday and the auction will be held on Sunday. The event is **FREE**.

WORKSHOP SCHEDULE

Saturday, November 7th

9 am.....Registration desk opens.

10 am.....Shane Linder-"Asian catfish"

11:30 am.....Lunch break.

1:00 pm.....Karen Randall-"Aquatic Plants"

2:30 pm.....Lee Finley-"Corydoras catfish"

4 pm.....Stan Weitzman-"Tetras"

5:30 pm.....Dinner break (Red, Hot & Blue)

\$10 members. \$16 non-members

7:30 pm.....Post dinner program--Lee Finley

Sunday, November 8

9 am.....Auction registration opens.

11 am.....Auction begins.

7 pm.....Approximate time for
end of auction.

**For more information
check out our website !**

**www.pvas.com
or call the PVAS hotline
703-352-3365**

*PVAS club T-shirts will be for sale
all weekend! Don't forget to buy one!*

The PVAS telephone hotline: 703-352-3365

www.pvas.com

The PVAS Internet Home Page

POTOMAC VALLEY AQUARIUM SOCIETY



9713 Bunchberry Pl. Vienna, VA. 22181

**Fall Workshop and Auction-November 7th & 8th
Register today! Time is short!!**



PVAS FALL WORKSHOP AND BANQUET REGISTRATION FORM

Attendance to the Workshop is free, but

dinner tickets must be purchased in advance by 11/2/98

Please check appropriate boxes.

WORKSHOP (free)

DINNER (at Red, Hot & Blue)

\$10-members

\$16-non members

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

RETURN ASAP TO: Rick McKay/PVAS Workshop
9713 Bunchberry Place, Vienna, VA. 22181



NOTES ON DICROSSUS MACULATUS

Don Kinyon
PVAS

What a beautiful fish!

It seems almost every new Dwarf Cichlid from South America that happens to make it into my fish room becomes my new favorite, but this one is special. The male, especially during courtship, is magnificent. The dark-on-light checkerboard pattern on his sides has a faint green color that blends into the reds, violet, green and blue on the dorsal, caudal, and anal fins. The female, while not nearly as colorful, turns dark yellow, and her ventral fins become jet black during mating and nest-guarding.

These fish come from the Clear water tributaries of the Amazon, areas where the water is very soft and acidic, according to literature, and the rivers are slow moving.

After years of wanting these fish but not being able to acquire any, (read: not willing to pay pet shop prices) I had the great luck of getting some through a business venture. I managed to kill two of them on the way home, somehow got caught up in the folds of the plastic bag, but ended up with one male and three females; not a bad ratio for setting up a breeding tank.

The fishes' new home was a fifteen gallon extra long, equipped with two home made sponge filters, some waterlogged locust wood, and oak leaves enough to cover the bottom. A submersible heater and a thermometer completed the set-up. The water they arrived in was very soft and acidic, so it didn't take long to acclimate them to rain water; less than one degree hardness, and pH of 5.5.

They had good appetites from the first day, and ate everything put in front of them, but didn't take to flake food too well. The timing was right for live foods, and spring time in Virginia supplies enough water fleas and insect larvae to feed a great number of fish very well. All that live food, supplemented with frozen and some freeze-dried foods, and twice-weekly water changes, got the fish into condition quickly. The fresh rainwater was a few degrees cooler than the water in the tank, about seventy-nine and eighty-two degrees, respectively.

After missing one of the females for two days, I poked around the tank a little, and found her sitting on a nest of about 150 eggs. As luck would have it, two weeks later was my family vacation, so no one would be able to feed the fish for ten days. I didn't think the adults, or even the mother by herself, would resist the temptation of eating the young, so at nine days free-swimming, the babies got transferred to an established twenty gallon high, same water and temperature. The new tank was choked with water sprite and Java moss, and had a healthy growth of algae, so I had hopes of at least some of the fry surviving.

The day before we were to leave, a brood of *Apistogramma* fry came out from hiding in another tank. I had little hope of these young making it on their own, so they were siphoned out and put with the young *Dicrosus*.

Upon returning from vacation, I found many young fish in the fry tank; but which kind? It wasn't until two more weeks had past that I was sure of the identities of the fry; about twenty-five of each.

From this point on, the young fish ate a variety of live foods; baby brine shrimp, vinegar eels, sifted *Daphnia*, and micro worms. They grew slowly but steadily, and at one month were three eighths of an inch long. At this point they were fed much the same as the adult fish, though more finely chopped.

At two months, the fry are small copies of the adult female, none yet showing any color. It's interesting to see how territorial young fish can be, even at under one half inch in length.

Maybe in the future, if more people spawn them in home aquariums, these fish will be more readily available, and at a more reasonable price.

Breeding the dwarf seahorse, *Hippocampus zosterae*

by Tom Neal

I would like to talk about an animal that amazes anyone lucky enough to see one. With a horse-like head, armor plated body, and a prehensile tail this is surely a creature that myths are made of. As a matter of fact images of seahorses can be found throughout history in many different cultures.

There are still myths around today about magical healing powers and virility being derived from the consumption of the seahorse. Millions of seahorses are killed for the medicine trade in the far east. This wouldn't be a problem if there were some scientific evidence that supported this claim. Unfortunately, their being consumed for medical and virility purposes has no basis in fact, therefore all of these animals die for nothing. Of the thirty-five to forty known species of seahorse most, if not all of them, are in danger of going extinct.

The importance of captive rearing seahorses is paramount. At the current level of collection we may not have any horses left to admire in the not too distant future.

I would like to concentrate in this article on *Hippocampus zosterae*, commonly known as the dwarf seahorse. The dwarf seahorse comes from the coast of Florida, along with its relative the much larger *Hippocampus erectus*. The dwarf seahorse is the second smallest seahorse in the world, an adult would max out at two inches. This makes it, unlike its cousin *Hippocampus erectus* which reaches twelve to fourteen inches in length, a perfect candidate for the person that only wants a small tank.

The dwarf seahorse is found near the water's surface in floating algae beds. This is where the collectors that I have spoken to find them. In nature they hang onto their hold fast and browse all day long looking for edible prey items.

Before I go any further I would like to say that this seahorse, like all of the other seahorses are not considered good marine pets, especially for beginners. Unless you are willing to have at least three culture tanks for every seahorse tank then leave them be.

The reason that seahorses are so difficult is because they have a very precise feeding system. They will only eat live foods, there are some rare exceptions for the larger species of horses but this is more an exception than the rule. Feeding the dwarf correctly means that you must learn to culture live foods for them. Culturing brine shrimp, marine rotifers, and marine micro-algae is a must for the dwarf keeper. There are other small foods that can be cultured such as the Gammarus and mysis shrimps. These last two are not as common as the fore mentioned live foods.

For the best success your horses should have live foods in front of them most of the day. These animals cannot survive on one or two meals a day. The reason is because they have no real stomach, therefore, they have no capacity to store food. All they have is an enlarged intestine that breaks down their meals into fuel for their body. In my opinion the food must be present constantly to keep the horses from becoming hollow-bellied. Feeding them brine shrimp, from newly hatched to a week old, that is fortified with selcon or other similar product, and rotifers will meet their nutritional needs quite well. As stated before, any other food that you can find to feed these animals will only increase your chances of breeding them.

The breeding tank, in my humble opinion, should be set up as simply as possible. I use either a sponge filter or a corner bubble-up filter and a small power filter to take care of my water. The bottom has a substrate made up of doiomite, crushed coral, aragonite or crushed oyster shell. This substrate helps to buffer the pH of the water. The horses need plenty of hitching posts. I use plastic plants of different styles and heights. This gives the horses many different attachment areas and they can pick whichever one they choose. The reason I use the plastic plants is because I'm trying to imitate in a small way their natural environment, as they are found in floating algal and seagrass beds.

As I stated earlier I use simple forms of filtration. The sponge filter is the easiest and cheapest way to maintain good biological filtration. They are also very simple to maintain. Just squeeze them out every couple of weeks in old tank water to clean them out. When they squeeze clean put them back on the filter. I am running a twenty-nine gallon aquarium with just this type of filtration and having excellent results. The only problem I noticed was that there were egg shells from the brine shrimp collecting at the water surface. I took a small power filter and placed it on to the aquarium. I set the filter to low because seahorses don't like current. In this power filter I only used mechanical filter media. I used no carbon nor any other types of chemical filtration.

I maintain my water quality by doing frequent partial water changes. I change twenty-five to fifty percent of the tank's water volume every seven to ten days. To save money on salt mix I reuse the waste seawater to hatch my brine shrimp, culture my rotifers, culture my micro-algae, and I mix it into my freshwater tanks that require harder water. I know of many seahorse hobbyists that don't do any amount of water changes and they are always battling disease. I have never had any disease in my seahorse tanks. I attribute this to my frequent partial water changes.

Water parameters for seahorses should be: ammonia 0, nitrites 0, nitrates less than 10 ppm, pH 8.0 - 8.3, specific gravity 1.020 - 1.024, and the temperature from the low sixties to the mid seventies (F). Many people keep their horses way too warm. *Hippocampus zosterae* likes cooler water in the temperatures stated above. They can tolerate higher temperatures but prefer the aforementioned temperatures.

Breeding these animals is really neat. They have a complex courting dance. Unlike larger seahorse species the dwarfs do not mate for life. When a male is interested in a female he

will swim up to her and settle down a few inches from her. While attached he tries to get the female's attention by quivering his whole body and puffing out his pouch. He puffs out his pouch to show it off to the female. It's like he's saying to her "look here, my pouch is very large and has lots of room for your eggs". If the female doesn't swim away he'll come a little closer. This goes on for an extended period of time until he ends up sitting right next to her. At this point if the female is interested she will quiver back at him. The male really gets excited, his breathing quickens.

Once they quiver at each other for a while then both swim into the water column. Once in the water column the pair will actually grab each other's tails. It is really a beautiful sight watching these lovers gracefully swim around the aquarium together. They actually look like teenagers in love. They will swim around like this for an hour to several hours, quivering at each other every so often.

When the time is right they settle down again and commence to mate. The female lays her eggs into the male's pouch. The eggs are fertilized as they are entering the pouch. Once the male receives the eggs he will wiggle and squirm quite a bit. What he is doing is pushing the eggs further into his pouch and arranging them so that they can develop. Once the eggs are in place a sponge-like covering grows over the eggs. This growth is for protection and supplies nutrients and oxygen to the eggs. It also rids the eggs of wastes and carbon dioxide.

Hippocampus zosterae has the shortest known gestation period of any of the seahorse species. The average time for the eggs in the pouch is fifteen days. When the time is right and the little babies want out the father gets very restless. The eggs actually hatch first within the pouch.

The father goes through what looks like intense labor pains. When giving birth he'll anchor himself and prepare for the grand moment. He will contract his stomach, trying to force the fry to the top of the pouch. I have watched this several times and it always fascinates me.

This process seems to take several hours. The male gets exhausted, he stops and rests every few minutes. Finally, little tails are seen sticking out of the pouch. The male gets even more active now, pushing and rubbing harder and harder when all of a sudden something gives and a few babies squirt out into the water column. The male does not stop to rest, there are still more babies inside his pouch. He pushes and rubs until all of the babies are expelled from his pouch.

The dwarfs are said to give birth to up to fifty "ponies". In my own experience I never had that many born at one time. My broods average around fifteen ponies. The babies are so cute. They look like miniature versions of the adults, only 1/20 th of their size. The young are attracted to light and head for the surface where they attach to suitable floating objects.

Even though seahorses don't eat their young I still raise the babies separately. I take the father and place him into a small birthing container. This birthing container is no larger than one gallon and the only items inside it are a sponge filter and floating plastic plants. I have developed a way to raise fish in this very small container. I take the small container and place it into the main aquarium. I fill it with aquarium water and then use stainless steel c-clamps to secure it to the inside corner of the aquarium. Then I take a "Tetra brilliant" sponge filter and attach it to the inside of the small tank. This filter has an adjustable outflow that can be placed in many different directions. I adjust the outflow so that it is over the main tank. When the airpump is turned on water is pumped out from the small container in to the main tank. Next I take the intake tube that is u-shaped from an "aqua-clear 200". I fill it with water and gently place one end into the container and the other end in to the main tank. Fresh water from the main tank will be siphoned in here while water is pumped out from the sponge filter. What you have now is a small circulating system that depends on the larger tanks filtration to remain clean and stable. The only maintenance to this is to siphon the crud from the bottom of the small container every couple of days and to rinse out the sponge whenever needed.

When this set-up is ready I place the pregnant male in to await birth. Once the male has given birth he is removed and placed back in to the main tank. The reason that I go through all of this trouble is because the babies will have a much better chance of survival if the parents are not competing with them for food. I raise the young in such small containers to make the food much more accessible to them. They don't have to hunt to find it. The less they have to move around looking for food, the less energy they use up and the faster they will grow.

The fry need live foods twenty-four hours a day for the first two weeks. This seems to promote the best growth. I leave a small light on above the tank constantly for the first two weeks of their lives. This does two things - first it keeps the fry actively feeding and second it draws the baby brine and rotifers to the surface where the babies are looking for food.

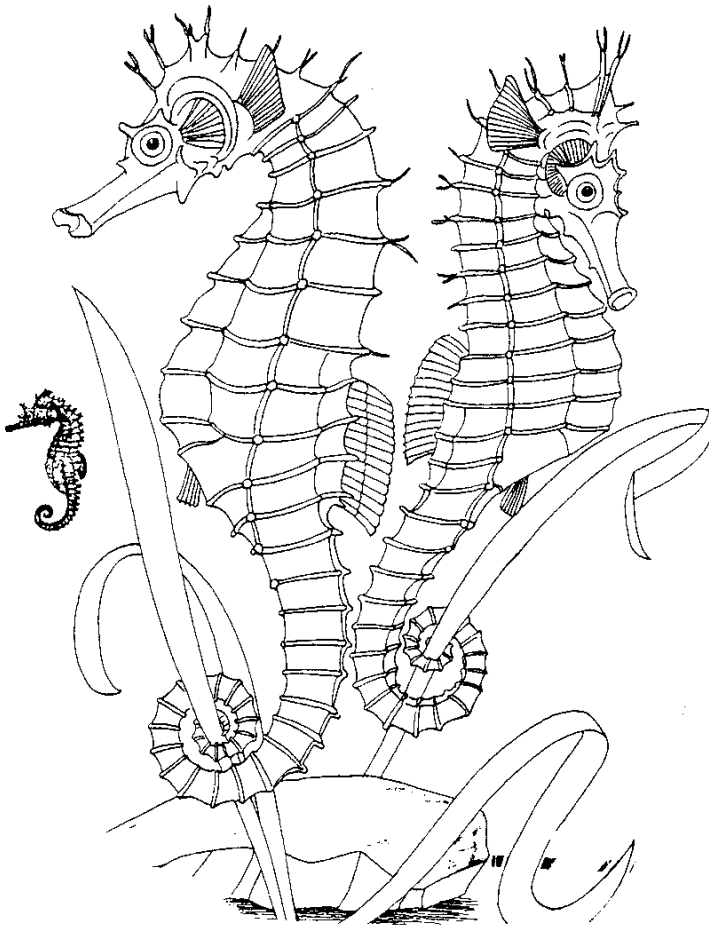
The dwarf has been raised solely on baby brine shrimp, but I like to feed my adults and ponies rotifers also. Brine shrimp is very easy to hatch. To make it a better food you must fortify it with a food additive such as selcon. I add .5ml of selcon to the brine shrimp hatching container twenty-four hours after adding the brine shrimp eggs. I let the brine shrimp feed on this for twelve more hours and then I feed the shrimp to the horses. This is good for adults and ponies alike.

The other live food that I feel is a must is marine rotifers. These tiny creatures are approximately one third the size of baby brine shrimp when fully grown. The animals can be cultured with a little practice. To culture them you will have to learn to culture marine micro-algae which the rotifers feed upon. Rotifers are an excellent way to provide supplemental nutrition to your horses. Again, adult and baby dwarf seahorses will enjoy this food. Some people have raised babies on brine alone, but I feel that feeding them

rotifers too will benefit the small ponies that may be runts and unable to feed on baby brine.

Breeding these sea ponies is very important, but don't take on the responsibility unless you are willing to do all of the extra work to take proper care of these animals. All too often seahorses die of starvation. What a pitiful end to such a regal animal.

Reprinted from *LIVEBEARERS*, Bulletin of the American Livebearer Association.
For membership information contact: Tim Brady, 5 Zerbe St., Cressona, PA 17929.
<http://petsforum.com/ala/>



Ammonia

How to track an Invisible Killer

by Colin G. Brodie B.Sc., Hons.

It happens to the most diligent of fish keepers. You awake one morning to find half of your aquarium inhabitants dead and the other half taking their last gasps. More often than not, the cause of this unannounced death is ammonia.

Preventing this disaster from occurring is an ongoing balancing act for all fish keepers. Ammonia is produced by natural processes - the decomposition of plants, dead fish, uneaten food and waste excreted by fish.

In nature the problem of ammonia accumulation is solved by a biological process called the nitrogen cycle. Simply put, this process converts ammonia through nitrite to nitrate which can then be used by plants. When the plants die or are eaten they contribute to the build up of ammonia and the cycle is complete.

In an aquarium this cycle is also in operation but the balance is often weighted heavily in the production of ammonia and not enough in ammonia conversion and nitrate uptake. As a result ammonia levels rise.

The frantic fish keeper has several options to control ammonia in the aquarium. Low stocking levels, frequent water changes, efficient chemical and biological filtration and chemical treatments are all good methods to keep ammonia in check. However all this work is for nothing if you don't know how much ammonia is present.

For many years various methods of monitoring ammonia concentrations have been available. The most frequently used methods are based on chemistries that make use of

Nessler's reagent or Salicylate. These methods typically involve mixing chemicals and waiting 5 - 20 minutes for a result.

Traditional methods involve the use of liquids, powders or tablets. Liquid test kits have the benefit of being easy to mix. However liquid reagents are, in general, unstable and lose their accuracy rapidly over time. Also the liquids used are toxic and the opportunity for spills and accidental ingestion is possible.

Powder test kits are more stable and have an improved shelf life. They are easy to use but involve many steps and accidental spills of dangerous chemicals can result when opening the sachets.

Of these forms of test kit the safest to handle is probably those that involve the use of tablets. They are simple to use and have good chemical stability. It does, however, take time and effort to dissolve the tablets in the water sample and a lengthy wait is still required before a reading can be taken.

A more recent development in ammonia testing is the use of test strips. These small, easy to handle strips have been developed from medical technology. They are safe, fast and accurate.

The strips consist of a plastic handle with several small pads situated close to one end. Each pad has a specific function. For the ammonia test strip the end pad is the indicator pad in which the color reagents are held. This is the pad which will show if ammonia is present. The other pads are impregnated with additional chemicals that modify the water

sample to allow the color reaction to take place. One advantage of this system is that all the chemical reagents have been pre measured and are safely held in the reaction pads until activated in water.

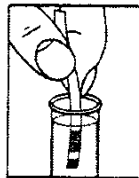
To test for ammonia you simply move the strip around rapidly in a water sample and then read the result after a short wait. The whole process takes only one minute.

Speed and accuracy are both a feature of these strips. Test strips are measured against standard solutions for accuracy as part of their quality control. The quality control standards are set such that 67% of the time the true reading will be within one half of a color block and 100% of the time within 1 color block. These are similar standards to those used for medical use test strips.

In reality the quality of the strips released is much higher than the control standards with the strips being, on average, within 10% of the true value 90% of the time.

It is the speed with which an ammonia reading can be determined that makes these strips such a valuable tool for the aquarium keeper. By offering a rapid response the test strips allow the fish keeper to take actions based on accurate information when he needs to take that action, now!

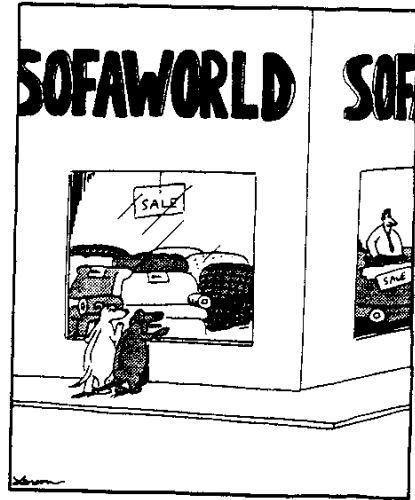
Having determined what levels of ammonia are present an appropriate action may be taken. Interpretation of ammonia results is influenced by other factors, most notably temperature and pH. All test



kits offer some information on how to interpret results and should be followed closely. As a general rule, when the pH and temperature rise so does the harmful effects of ammonia.

Ammonia is an important byproduct in our aquariums. With regular monitoring and good husbandry practices it should never pose a threat to the well being of the aquatic organisms that we keep.

The modern day fish keeper now has at his disposal an impressive array of test kits to allow him to track the once invisible killer, ammonia. ♦



"Oo! I'd get up on that big fuzzy one!"

Does this remind you of your typical weekend?

Then come to the PUTS Auction and Workshop instead.



Tarantula coffeehouses

Breeder's Award Program

BAP Checkers:

Annandale/Falls Church area: Jeff Burke (703) 941-3230
Centreville/Chantilly/Manassas area: David Snell (703) 968-9084
Centreville: Michael Cardaci (703) 222-3833
Frederick: Dov Goldstein (301) 694-7582
Montgomery County: Ray Hughes (301) 424- 3531
Montgomery County: Wayne Considine (301) 977-5973
Mt. Vernon/Olde Town area: Gene Moy (703) 765- 0865
Oakton/Vienna area: Rick Mckay (703) 281- 1647
Occoquan/Lake Ridge area: John Mangan (703) 491-4980
Prince George's County: Lorne E. Williams (301) 630-7674
Springfield/Franconia area: Pete Thrift (703) 971-0594
Warrenton/Manassas area: Gerry Hoffman (540) 347-7486

We still could use some more checkers. There are a number of areas where we don't have anyone. Even if there is someone already listed for your area we could always use someone else to help spread the work around.

BAP Standings:

Breeders Award *
Intermediate Breeder **
Advanced Breeder***
Master Breeder****
Grand Master Breeder*****

Gerry Hoffman 905****
Jeffrey Burke 445***
Don Kinyon 445***
John Mangan 165**
Gene Moy 150**
Lorne Williams 155**
Dave Snell 75*

Recent activity: Don Kinyon receives 30 points for *Microrashora rubescens*, 30 points for *Dicrosus maculatus*, and 20 points for *Corydoras habrosus*. David Snell receives 10 points for Blue Gularis (*Fundulopanchax sjoestedti*), 15 points for *Nothobranchius færschi* and 10 points for *Aphyosemion cognatum* Bandundu. This advances Dave to Breeders Award status.

Reminder - BAP certificates are presented at the Dec. PVAS meeting. To count towards receiving your certificate this year completed paperwork must be in my hands by Dec. 7. If you have any questions see me at a monthly meeting or call (703) 491-4980 (leave a message and I will get back to you as soon as possible). Paperwork can be mailed to me at: 12633 Oakwood Dr. Woodbridge, VA 22192.

Breeder's Award Program

BAP Checkers:

Annandale/Falls Church area: Jeff Burke (703) 941-3230
Centreville/Chantilly/Manassas area: David Snell (703) 968-9084
Centreville: Michael Cardaci (703) 222-3833
Frederick: Dov Goldstein (301) 694-7582
Montgomery County: Ray Hughes (301) 424- 3531
Montgomery County: Wayne Considine (301) 977-5973
Mt. Vernon/Olde Town area: Gene Moy (703) 765- 0865
Oakton/Vienna area: Rick Mckay (703) 281- 1647
Occoquan/Lake Ridge area: John Mangan (703) 491-4980
Prince George's County: Lorne E. Williams (301) 630-7674
Springfield/Franconia area: Pete Thrift (703) 971-0594
Warrenton/Manassas area: Gerry Hoffman (540) 347-7486

We still could use some more checkers. There are a number of areas where we don't have anyone. Even if there is someone already listed for your area we could always use someone else to help spread the work around.

BAP Standings:

Breeders Award *
Intermediate Breeder **
Advanced Breeder***
Master Breeder****
Grand Master Breeder*****

Gerry Hoffman 905****
Jeffrey Burke 445***
Don Kinyon 445***
John Mangan 165**
Gene Moy 150**
Lorne Williams 155**
Dave Snell 75*

Recent activity: Don Kinyon receives 30 points for *Microrashora rubescens*, 30 points for *Dicrossus maculatus*, and 20 points for *Corydoras habrosus*. David Snell receives 10 points for Blue Gularis (*Fundulopanchax sjoestedti*), 15 points for *Nothobranchius foderschi* and 10 points for *Aphyosemion cognatum* Bandundu. This advances Dave to Breeders Award status.

Reminder - BAP certificates are presented at the Dec. PVAS meeting. To count towards receiving your certificate this year completed paperwork must be in my hands by Dec. 7. If you have any questions see me at a monthly meeting or call (703) 491-4980 (leave a message and I will get back to you as soon as possible). Paperwork can be mailed to me at: 12633 Oakwood Dr. Woodbridge, VA 22192.

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

Application for Membership

Date: _____

Name: _____

Street: _____ Apt. _____

City: _____ State: _____ Zip: _____

Telephone: _____

Optional information:

Occupation: _____

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

Number of aquariums: _____ Time in the hobby: _____

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

Reason for joining: _____

Membership dues for PVAS are:

Individual/Family: \$12/yr

Corresponding: \$ 9/yr

Junior (under 18) \$ 5/yr

Please send application and check to the address above.

SUPPORTING SHOPS

ANNANDALE SUPERPET
7406 Little River Trmpk.
Annandale, VA 22031
256-2400

AQUATIC
ENHANCEMENT
PO Box 22677
Alexandria, VA 22304
765-4620

DISCOUNT PET CENTER
9028 Mathis Ave.
Manassas, VA 22110
361-7769

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

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

AQUARIUM CENTER
Liberty Rd. at Offut Rd.
Randallstown, MD
521-4529

BROTHER'S PETS
13810 Georgia Ave.
Aspen Hill, MD 20906
460-4600

CONGRESSIONAL
AQUARIUM
162 Congressional Ln
Rockville, MD 20852
881-6182

DISCOUNT PET SUPER-
MARKET
1321 A&B Rockville Pike
Rockville, MD 20852
309-9110

FISH FACTORY
AQUARIUM
811 Russell Ave. #C
Gaithersburg, MD 20879-3505
977-7500

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

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

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

RICK'S FISH & PET SUPPLY

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

SHOWCASE AQUARIUM

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

TOTALLY FISH

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

TROPICAL FISH WORLD

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

TROPICAL LAGOON

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

AQUATIC CREATIONS

LTD

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

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without them.

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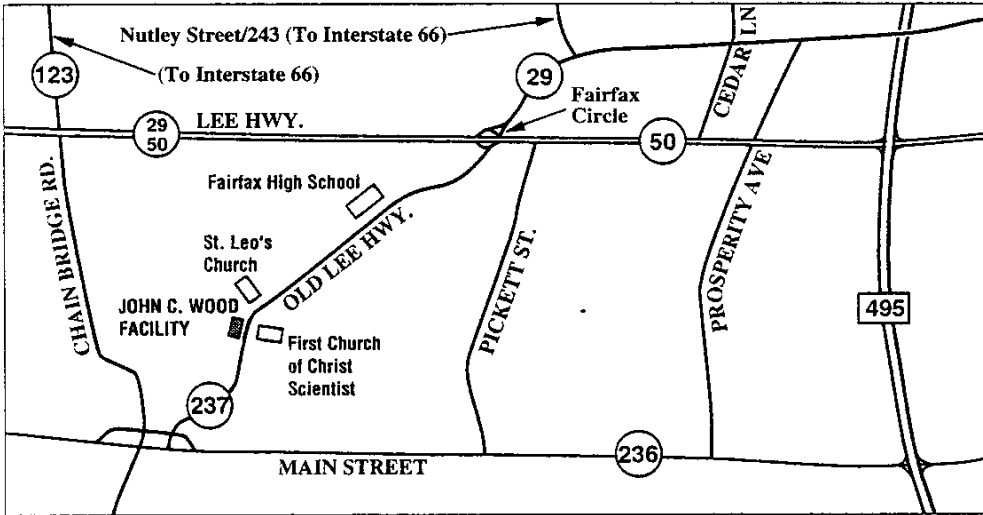
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Marineland Aquarium Products
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Rainbow Plastics- Filter Division
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Wardley's

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

*Auctions
& Workshop*

*21 Feb.
13 June
13-14 Nov*



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!