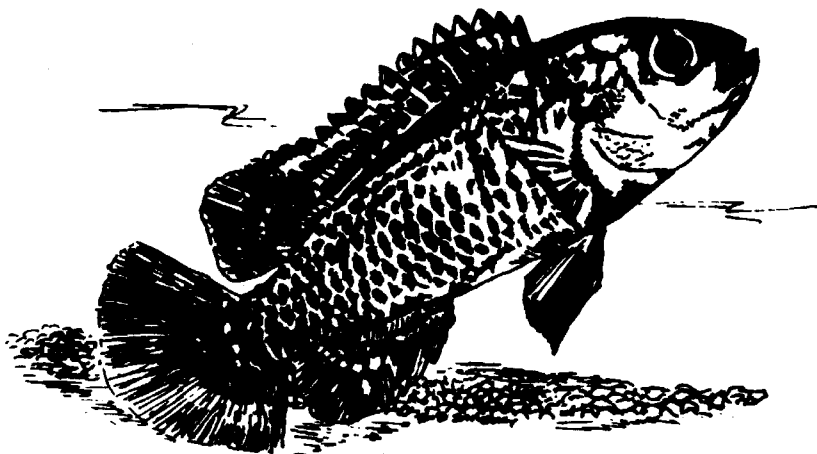


* DELTA TALE *

Sept., 1978

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Cover Picture: Haplochromis multicolor,
Egyptian mouthbrooder,
by Bob Sarecky

MINUTES OF THE AUGUST, 1978 BOARD OF GOVERNOR'S MEETING

The August board meeting was held at the home of Gene and Millie Aldridge on August 2, with 12 members present.

The main topic of discussion was the "Expanded Bowl Show" to be held in November. At the July open meeting the board had been asked to formulate a plan for such a show. There was a great deal of discussion. The board, at length, came up with a suggested plan to be presented at the August open meeting.

The fall banquet and auction were discussed. O'Connell High School has not responded to our request for a Sunday in October when we can use their cafeteria for the auction. The banquet committee has not come up with any usable sites which come within our expense limits. The program committee will be asked to get a firm commitment from a speaker as soon as we can set dates for the banquet and auction. The banquet will be held the Friday evening before the Auction on Sunday.

Pat Tietjen announced that she is moving, which means we will need a new Recording Secretary for the balance of the year. It was decided to ask for volunteers at the August open meeting.

Because of the inability of one of the board members to attend Tuesday evening board meetings starting in September, it was decided to change the day for that meeting, with the possibility of a permanent day change to be discussed at the next board meeting. The constitution does not commit us to any exact day of the week.

The September board meeting will be held at the Mahoney's home, Thursday, Sept. 7 at 8 p.m.

The meeting was closed at 10:05 p.m.

ADDENDA:

1/ The plan for the "Expanded bowl show" in November was duly presented at the August open meeting. There was little discussion. A motion was made that we drop the plan and return to the scheduled double point show, with categories as planned in the original schedule. The motion was seconded, there was no discussion, the motion was accepted by acclamation.

2/ We have been informed by O'Connell High School that in future the charge for the cafeteria to P.V.A.S will be \$100 a day (Half price due to students in our membership.) This would cut dramatically into our profits and lower our chances of good speakers from out of town for the banquet, since we could not, then, feel free to pay expenses from farther than Bethesda, Md. Accordingly, we are looking into other places to have the auction at less expense. Hopefully by the September open meeting we will be able to announce final time and place.

THE PEPPERED CORYDORAS

Joe Paull, PVAS

The corydorax catfish are curious looking creatures; they come in one basic body style, but offer a wide range of sizes and colors. At one end we find *C. hastatus*, the pygmy cory, which reaches a size of one and one half inches. While *C. barbatus* reaches five inches. In the middle we have the peppered corydorax, *C. paleatus*, which at three inches makes an ideal member of any tank. In addition to being the right size, this is one of the more colorful species in the genus. While dark gray blotches on a greyish-white background may not sound very exotic, in life it is fairly pretty (so far as a corydorax can be pretty, anyway.)

Like its relatives, *C. paleatus* is extremely hard and undemanding. This is also one of the simpler species to spawn. The males are easily sexed by their smaller size, slimmer body and taller dorsal fin. The females are larger and fatter. Conditioning the breeders poses no difficulties because they eat everything in the way of prepared foods, but they fill out faster with extra treats such as live tubifex, white worms and daphnia.

Once your breeders look fat and active, the trick is to persuade them to get down to business and spawn. Usually a one quarter water change and a two to three degree drop in temperature starts spawning activity, but occasionally nothing seems to induce the female to start. Try anything that comes to mind. They'll spawn eventually. I once netted my pair out of their cosy 29 gallon tank and dumped them into a freshly set up 15. No acclimatization, no pH, hardness or temperature checks were performed. They were dumped! They spawned the next day.

Spawning follows typical Corydorax procedures. The female swims about frantically with the male (or males) close behind as she cleans an occasional leaf or spot on the glass. Eventually the pair settles to the bottom where they form a "T", the male lying on his side with the female's mouth pressed to his vent. The female releases several (3-8) eggs into the pouch formed by her ventral fins and swims back to one of her previously cleaned spots, which she briefly scrubs again and there deposits her eggs. After this goes on for a half dozen or so times, the female lies on the bottom looking utterly exhausted. The male swims busily about her, brushing the back of her head with his barbels, trying to get her moving again. After a brief rest, spawning starts again and continues in the same manner until approximately 250 eggs are laid.

And now, contrary to other published accounts, I suggest that you remove the breeders. They do indeed eat their eggs! (So will anyone else in the tank!) Since the eggs are very firmly fastened to whatever they touch, it is difficult to remove them without damage unless most were placed on the plants, filters, or other moveable objects. The eggs hatch in 4 to 5 days at 74° and the fry are active and hungry in another 2 or 3 days. Normally only 30 to 40 percent of the eggs are fertile, but then who needs (or has space for) 250 little corys?

The fry eat everything offered to them, but a word of caution here; I have experienced heavy losses after massive feedings of baby brine shrimp. Evidently the young corys are much more sensitive to salt than the adults. On a well balanced diet, which should include some vegetable matter, they grow rapidly, produce cloudy water by the tank full and reach a size of one inch in eight weeks. Then you must find homes for all of them.

GROW THEM GREEN

For real beauty, a living picture, you just can't beat a well planted aquarium. Unfortunately, many people have difficulty growing aquarium plants. First of all, I just don't quite buy that 'talk to plants' bit. I have grown both aquarium plants and house plants for years and don't talk to them. I believe, however, that there is a psychological effect on the plant keeper who does talk to plants. It is almost impossible to talk to your plants (or fish) and not look at them closely.. This is (I think) the key to growing good fish or plants. To observe them carefully. It will quickly become apparent what their needs are if you observe them well.

Sick fish are easy to spot when you are buying them. Unfortunately it is not as easy to tell when plants at a dealers' are not healthy. Many problems with plants begin with the purchase of plants that are already dead or dying. Sometimes they can be revived, but often nothing can help. Shipping and storing (without lighting) is hard on plants. If possible, but from a dealer who has a reputation for having healthy plants or from an individual who grows them. Look for crisp, white roots.

If plants are going to be a problem, why grow them in the first place? There are so many natural looking artificial plants on the market, why not use these? Well, the main reason most aquarists grow plants is for beauty. It is true you can achieve almost the same results with artificial plants, but the pride of growing your own just can't be beat. A well planted aquarium gives security for shy fish. Top floating plants provide cover for livebearer babies until they can be separated from their parents. Often it is not even necessary to separate them if the planting is good enough. Plants also provide spawning sites for many egg layers. Most fish benefit from some greens in their diet and many plants provide extra food for fish. One of the least important reasons for keeping plants is oxygenation. Most people think plants are necessary to provide oxygen for the fish, usually, however, most of the oxygen in the water is provided by exchange between the water surface and the air. Any mechanical means of agitating the water brings more water in contact with the air, therefore providing more oxygen. The little that plants contribute to the aquarium is unimportant. What is important, however, is the plant's utilization of fish waste. Water that is saturated with fish waste cannot absorb oxygen as well. Plants need fish wastes to grow on. Both carbon dioxide from respiration and solid fish waste from the bottom are utilized by plants. Thus, a well planted tank will absorb more oxygen from the air/water contact.

Once you have acquired healthy plants, the second consideration should be what type of fish you are going to keep them with. All fish are not compatible with plants. Most Cichlids (Angels and dwarfs are the main exceptions) cannot be kept in the well planted aquarium. They will uproot the plants and destroy them. For these fish, often even artificial plants are impossible. Most other fish except for the plant eating varieties will live well in the planted aquarium. However, spawning them often is better done in the unplanted aquarium. Water and temperature requirements for spawning many fish are not good for many plants. The heavy feeding and frequent cleaning necessary for raising baby fish usually are more easily handled in an unplanted aquarium. Don't fight a losing battle. Concentrate your efforts on the community aquarium and you will be rewarded with a beautiful, planted tank.

When undergravel filters were first introduced into the aquarium scene, aquarists complained that they could not grow plants with them. Some of them had always had problems with plants, but many aquarists who had had good plants before were having problems also. Previous to the undergravel filter, the rule was to have only one-half to one inch of gravel in the aquarium. Deeper gravel would soon turn black due to decomposing surplus food and fish wastes. This in turn killed the plant roots and plants would die. Undergravel filters were not understood by the old aquarists who set up their aquariums in the same manner. The plants had nothing to grow on. In addition, the filters did not work adequately with the shallow gravel. By increasing the gravel to one and a half to three inches and slowing the filter flow, plants had adequate nourishment and the filter could build a colony of beneficial bacteria for adequate filtration. In the long run, by keeping the oxygen-less decomposition from taking place in the gravel, many plants actually benefit from the undergravel filter and grow better than before. Remember: without undergravel filter, shallow sand; with undergravel filter, deep sand. Box filters or power filters usually do not bother plants much.

Lighting is important to plants. Too much light encourages algae which coats the leaves and competes with the plants for food. Too little light and the plants will grow weak and stringy and eventually die. Natural sunlight is good for plants but only in very small amounts. Aquariums should never be placed in front of a sunny window. Place your tank across the room where only the late evening or early morning sun will reach it. Actually, weaker lighting for a longer time seems to be more beneficial than very strong lighting for shorter periods. I use 15 watt bulbs in all my hoods but I leave the lights on all day. Some plants seem to grow better under incandescent lights, other better under fluorescent. Both types of light are adequate for a good selection of plants if the wattage and times are properly balanced. Only experimentation will give you the proper proportions for your tank. There are too many variables to try to establish a formula. Remember that incandescent lights produce heat which can overheat a tank during the hot summer months. This can be combatted somewhat by leaving the tank partially uncovered.

Temperature is important with plants. Temperature and lighting seem to be somewhat interlinked. Warm temperatures encourage faster growing of plants. This requires more or stronger lighting. Most plants do well at cooler temperatures. 70 to 78 degrees will suit most plants well. Cryptocorynes do well at even cooler temperatures. Swordplant is one plant that does well in the warmer aquarium and is a standby for angels and fish that like warm water to spawn.

Fertilizer is important to plants. You can add plant food to your tank or you can put a planttab into the gravel near your plants. Usually however, if you adjust your filtration a little slower so it leaves something for the plants, extra food is seldom necessary. It seems a little self-defeating to filter it all out and then add it back in. Plants need time in place to grow well. Plants that are constantly being uprooted and moved never get a chance to get established. If you know you will need to move your plants often, pot them. Then when you move them, move the whole pot. Many aquarists like to plant special plants in pots, anyway, putting a little soil in the bottom of the pot and covering the top with gravel.

What about snails and plants? I have found snails to be beneficial to plants. They will keep the algae cleaned off the leaves and, by eating dead plants and excess food, they prevent the type of decomposition in the tank that puts harmful gasses in the water. This recommendation applies to common ramshorns, mystery snails and horn-of-plenty snails. There are some snails which are not compatible with plants and other varieties must be tried out carefully. The three snails mentioned (contrary to popular belief) will not eat healthy, growing plants. If these snails are eating your plants, they are not growing as well as they should.

I haven't said much about pH or DH. I have found that if everything else is doing well these factors are not very important. I have had plants grow well in all variations of Ph and DH. Extremes should be avoided as much as possible, but in the long run these will not be the cause of trouble in your tanks. (Plantwise, anyway.)

(By Ella Pittman - Colorado Aquarist, Sept, 1975, Colorado Aquarium Soc.)
(Via several other exchanges.)

IN MEMORIAM

On August 3rd The Potomac Valley Aquarium Society lost a close and dear friend with the passing of Charles A. Jones, owner and manager of Home Aquarium on Glebe Road in Arlington.

A staunch supporter of P.V.A.S., Chuck was always ready to give advice to hobbyists. His patronization of our fish shows and auctions was more reliable than some of our own members and he could always be counted on for a door prize donation at our Annual Spring Show & Auction.

All of us in the hobby have lost a friend. To his loving wife Betty and daughter Joyce, we extend our heartfelt sympathy in their time of sorrow.

THE CONGO TETRA

Jim & Nancy White, Greater Akron
Aquarium Society, July, 1978, Tank Topics

Very few aquarists need an introduction to the Congo Tetra, *Phenacogrammus interruptus*. Their common name tells us where they are from, their beauty and grace is renowned in the aquarium world, their price is never cheap and they are seldom spawned. That, in a nut-shell, was the extent of our knowledge about Congo Tetras until we decided to spawn them.

The first thing we do before trying to spawn any species is to watch them. With most we've spawned, there has been some spawning activity in the community tank along with noticeably fuller-bodied females. With the Congos we started two years ago with one male and three females and we didn't see them so much as flirt. The females never looked even plum and our single male didn't grow past 2½ inches, the females smaller.

Our next step in spawning is to read all we can find on the species to be spawned. With the Congos, this led us to Willy Jocker's Spawning Problem Fishes, Book II, and to our dismay, he said, "Congo tetras raised in hard water are unsuitable for breeding." and, "Special attention must be given to nutrition. Dried food and live tubifex alone will not do." He goes on to recommend moths, small insects and house flies. Since we try our best to have as few as possible of these around, we seemed destined to failure as far as spawning Congo tetras were concerned. We also had a problem with water hardness, for even though we change water regularly, and have a water softener, in our established tanks (all with U.G. filters) the hardness measures 200 ppm. Not soft.

Then, early last year, opportunity knocked. While browsing through a local shop, we spotted a tank with 5 small Congos in it. The 3 females and 2 males were barely over one inch, males the larger. They had very little color, but seemed healthy, active and most important, young. We bought them, took them home and put them in the tetra community tank that had our old Congos in it. We intended to transfer the new ones to a smaller tank and add peat to soften the water. We also intended to make an effort to catch flies etc. as soon as spring arrived. We got busy with other things and ended up doing neither.

The young Congos didn't seem to mind. The basic diet fed to most of our fishes is a flake mix in the am (5 parts each of TetraMin regular, Diet 15 and Tetra green, and one part Earth Flakes) and frozen adult brine shrimp in the evening. Two or three times a week the tetra, barb and discus tanks get a few cubes of freeze-dried tubifex. Other than earth-worms, goldfish and guppies for the larger species and live baby brine shrimp and fry food for the babies, we do not feed what could be called a 'wide variety' diet. Even though we do use the 4 different flake brands, we mix them together (ratio mentioned above) in a styrofoam box and feed the mixture once a day.

Let me side step for a minute and give our reasoning for the flake mixture. First, we feel that Diet 15 and TetraMin are the best flakes around, and either alone would no doubt be an adequate flake food. However, they are different both in content and sink rate and we decided that if either were lacking in anything, the other would have it, so we use both in equal amounts. Next we add an equal amount of Tetra Green. Any green flake would probably do, but Tetra is available in 5 lb. buckets. We add this because we feel that most fishes, even predators, need more greens that we tend to give them. The predators eat smaller fishes whose chain of

food eventually reaches down to greens, so whether directly or indirectly, all get greens or the nutrients thereof. We also have snails in most of our tanks, so what the fishes pass up the snails get. Our last addition to the mix is Earth Flakes. These are made from earthworms and we add this to the mix simply because we've seen how well the larger fishes respond to live earthworms. These flakes may be nothing more than an added expense to our mix, but it makes us feel good.

Back to the Congos. Our young ones grew at a good rate and in less than 6 months time had passed up our old ones. The two young males were beautiful and needed just a little more growth to be show quality. The young females were also larger than the old females by a good $\frac{1}{2}$ inch. Still, there was no sign that we could see that any of the females were filling up with eggs.

When we finally decided to set them up to spawn early this year, we re-signed ourselves to the fact that it was going to be a long drawn out procedure of keeping them in soft water for some time then conditioning them on live foods until the females filled up with eggs. We started with a 10 gallon tank and put our ever-present U.G. filters in first. On top of these we put compressed peat plates, covering the entire filter. Next we added $1\frac{1}{2}$ " of small grain natural gravel over the peat. We filled the tank with fresh tap water and let it sit with filters running overnight. The next morning hardness measure 160 ppm and pH was 7.4. A heater brought the temperature to 80 degrees.

We put in a large clump of rinsed Java moss and decided to add our 3 old, stunted females to see how they would ride out the planned water alterations. A small Dynaflo was added with a bag of Aqua Stock "softrite" and a bag of Aqua Stock peatmoss. By the next day the hardness had dropped to 30 ppm and the pH was 6.8. The water had also turned the color of tea, and since the tank was set up endwise, we couldn't see the 3 females through the dark water. We took the handle of a net and rustled the clump of Java moss to see if the females were still ok and to chase them from hiding if so. Much to our surprise we saw dozens of small glass-like balls swirling toward the front of the tank. One or all of these 3 stunted females had layed eggs and without even a male present! Our long drawn out procedure had suddenly shortened considerably. The water was obviously 'right' for spawning and the females were apparently filled with eggs even though it didn't look like it. Though we didn't see the eggs when first layed, they would have to be considerably smaller, then absorb water and expand, for they are least twice the size of an angel egg. They are non-adhesive and clear.

We took the 3 females out and put them in a bucket so that they would be slowly acclimated back to the much different water of the community tank. Looking down on them in the bucket, we saw that 2 females were quite thin and one fat and assumed the two thin ones had layed the eggs. Back to the tank, we removed the Java moss and did a few figure 8s with a small mesh net to remove the infertile eggs.. By evening, the eggs we had missed were little white balls and easily seen for removal.

The Diatom filter was put on the tank and let run for a couple of days which brought us up to a week end. On Friday night we slowly acclimated the 5 young, but larger, Congos (3 females, 2 males) to the 10 gallon tank. By now the pH had dropped to 6.4 and the hardness remained at 30 ppm. We usually prefer to spawn fish with one female and one male, but since the 3 old females had done their thing together, we decided a group might be more at ease. The confines of the 10 gallon tank were quite different than the 70 gallon community tank they had been in. We assume they settled in nicely, but we couldn't see them due to the dark water and

the added clump of Java moss. We had also covered the back half of the tan tank with heavy cardboard and removed the Dynaflo.

Nothing happened on Saturday, but on Sunday afternoon a swirl of the water with a net handle revealed eggs; how many we don't know but we decided it was enough to work with and removed the adult Congos. We covered the tank completely to let the eggs incubate in darkness. By the next weekend, the fry had started to hatch (5 days at 80°.) The fry are not extremely small as tetra fry go, but could not eat live baby brine shrimp the first day. We could still see unhatched eggs along the front top edge of the gravel and it took 5 more days for all of them to hatch. They seem to be free swimming and ready to eat shortly after hatching. By the 2nd day the first fry hatched could eat live brine, but liqua-fry and powdered fry food were continued for a week to assure the late hatchers getting small enough food.

We changed 1 gallon of water per week for 6 weeks which helped to lighten up the color of the water somewhat. By this time the majority of the fry were about 1/2" long. We then moved them with all of their water to a 20 gallon tank and took two more weeks to finish filling the 20 with straight tap water, same temperature, about a gallon every other day or so. The final count was 86 flow-growing fry. The dozen fry we kept for ourselves are now 4 months old, 1" to 1 1/2" and just starting to sex out. This is noted only by a somewhat longer dorsal on the males. Up until now they have looked like nothing more than plain little silver fish. Fortunately, we know the hidden beauty is there are more than willing to wait.

It seems many of our experiences contradict what we have read in reference books. Our Congos were not raised in soft water and no special conditioning diet was given. We have since spawned them again with the same basic procedure used the first time and have gotten equally good results. In fact, once the water is to their liking they do what comes naturally and the fry are easily raised. (Editor's note, I have condensed the rest.) The White's attribute the differences in what they read and what actually transpired to: possible poor translation from a foreign language; better food and equipment now available; an over-exaggeration of depth of procedures needed.

UPCOMING BOWL SHOW CATEGORIES

	<u>CICHLIDS</u>	<u>OTHER EGGLAYER/LIVEBEARER</u>
Sept.	Angelfish & Discus Other African Open	Sharks & Loaches Catfish, non-corydoras Open
Oct.	Mouthbrooder, New World Haplochromis Open	Barbs Goldfish/Koi Open

AMERICAN CICHLID ASSOCIATION
CONVENTION

P.V.A.S. was well represented at the 1978 American Cichlid Assoc. convention in July. It was held at the Red Carpet Inn in Bridgeton, Missouri - just outside of St. Louis. Bill Trout, Pat Tietjen, Dana Best, Gene Aldridge, Pat & Maggi Mahoney, Nancy Reynolds and Woody Griffin were the PVASers attending. Most of us flew in, but four of us took off at dawn on Wednesday morning and in 12 hours of so reached Indianapolis, where we spent the night. From there it was an easy run to St. Louis the next day. That gave us most of Thursday afternoon and Friday morning to rest up -- visit the zoo -- watch fish and people arrive and get acquainted.

Presentations, starting Friday afternoon and through Saturday evening, by Pierre Brichard, Paul Loisel, Charlie Grimes, Ross Socoloff, et al, were outstanding. A tour of Beldts Aquarium Shop and Hatchery was most impressive. The Saturday morning tour of the Missouri Botanical Gardens impressed Nancy and your editor greatly. We had been torn between the morning speakers and the tour -- but the Gardens are worth visiting St. Louis to see all by themselves, so we were glad we opted for the tour. One disappointment was the several large lily-ponds on the grounds, with not a single fin to be seen. The only fish we did see were in the large greenhouse, geodesic dome they call the "Climatron." It is built on several levels with ponds here and there. As you go through the lower level, tunnels under the upper level ponds allow you to see algae eaters cleaning off the top of your tunnel.

Your editor was especially appreciative of Paul Loisel's plea to the A.C.A. membership for articles to publish in the A.C.A. magazine. I can truly sympathize with his sentiments.

Since all attendees wore name badges which included their home towns, it did not take long for some PVASers to spot a name tag from Washington D.C. Although admitting to being a cichlid freak, he had not heard of P.V.A.S. That did it! A sales job just short of threatening to burn down his home brought the promise to come to the next meeting and join us (which he indeed did.) His name is Vince Edmonson -- be on the look out for him and make him welcome, please.

A special note of appreciation must go to the host Missouri Aquarium Society, Inc. -- who put on a near perfect convention, despite last minute no-show speakers and lost films. WELL DONE, MASII

UPCOMING PROGRAMS:

September -- the A.C.A. slide presentation on Mbunas. As always, this will be an excellent show, with many beautiful slides. There will also be some slides from the A.C.A. convention, taken by some of the P.V.A.S members who attended.

October -- An excellent presentation on the breeding and raising of Corydoras cat fish.

RECOMMENDED READING FROM THE EXCHANGES:

"What does a fish see?" - Bill Kuhlman. Reprinted from The Soundings, Tacoma, in the "Wet Pet Gazette", White Rose Aquarium Society, August, 1978. Somewhat scientific, but of interest to those of you who are into physiology of fish.

"Breeding Report on Haplachromis polystigma", Charlie Grimes - The Nekton, May 1978 -- reprinted from Tropical Topics of August, 1977. Those of you heard him at the A.C.A. convention might enjoy reading him, too.

"An Introduction to the Distribution of Killies, (cyprinodontidae)" - Howard Adams, Plegostomus, Blackhawk Aquarium Society, August, 1978. Goes into that family in great detail as to numbers and where they can be found.

Public Aquaria, Two Approaches", Rev. David Garrett, Bits & Pisces, MSAS. Report on visits to Steinhort in San Francisco and the Seattle Aquarium.

P.V.A.S MEMBERS, OLD AND NEW:

We owe an apology to some old and some new, but never acknowledged members. Some dues renewal and original checks have been found that have been mislaid since last October. Most were from old members renewing -- and have been taken care of. However, Diane Nixon was dropped from membership roles because it was not known she had renewed, so we owe her our regrets -- please come back, all is forgiven (or at least we hope you will forgive us.) Some folks who evidently wanted to join and sent us their check have never even made it to the membership roster. They are the J.E. Griffiths of Manassas, Virginia. We hope they will accept membership from this month on and return to us with no hard feelings.

We also have a new member in Robert Plummer, who joined at the August meeting. He lives in Arlington.

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FOR SALE:

1 30 gallon glass tank -- excellent for anyone interested in Africans. You must pick up.
Call Gene Aldridge - 931-7426

TANK TIPS & STRAIGHT TALK

Stu Wheeler
The Glades, May, 1978 ✓
Everglades Aquarium Soc.

If a filter has been turned off for any length of time, do not turn it on again without first cleaning it. It is not an uncommon occurrence, at least in my house, to switch off the power filter to feed brine shrimp, for example - and to forget to switch it on again. If this should occur in the evening and you don't catch it until the following evening, the stuff in the filter will have begun to decompose anerobically (because no water has been flowing through, bringing fresh oxygen.) As you may know, some of the products of anerobic decomposition are ammonia, hydrogen sulfide and methane. All are extremely toxic to fish. In addition, the bacterial oxidation of ammonia cannot occur because it also requires oxygen. So these poisons accumulate in the filter and if it is turned on they are flushed into the tank.

This is probably most often encountered in the Vortex diatom filter which is used to remove tremendous amounts of organic material from a tank and then shut off and set aside until it is needed next. Several days later it is hooked up to another tank, turned on and within a few minutes the fish begin dying. At that point the person goes about raving that the "diatom" killed his fish. They didn't. The poisen gasses that built up in that two quart mason jar - cum cesspool - did them in. Take heed. Even if the poisons have not built up to the point where they will kill the fish they will stress them and make disease much more likely.

On thermometers: If you're having trouble locating your floating thermometer when you want to check on it, try floating it in the box of your outside filter. It doesn't intrude on the underwater scene and is always right on hand.

PORKY PUFFERS POINTERS,
Wet Pet Gazette, August, 1978 ✓

When something needs fixing, you glue it -- right? Why not your fish, too?

That's right, Super Glue will repair your fish! Researchers have determined that fish with large skin ulcers or lesions die, not from the lesion itself, but from the absorbtion of water in the inner tissues through the opening. Therefore, the clue to saving these fish is to put a waterproof seal over the lesion, keeping water out and allowing new skin to form underneath.

According to Dr. Conklin of Houston, Texas, skin lesions on humans heal nicely when Super Glued -- and the glue won't wash off when swimming or bathing. Veterinarians have been gluing perforated intestines and arteries back together for years.

The method is as follows: Hold the fish in a soft, moist net, blot the lesion as dry as possible. Apply an antibiotic powder such as one of the furan derivatives. Spread a small amount of the glue over the lesion. The glue dries in a matter of 10 to 15 seconds and then the fish can be placed back in the aquarium. Be careful to avoid getting any of the glue on yourself. It will quickly and firmly stick your fingers together.
(Reference: TFH, July, '77, Pg.80-81.)

FIND THE FISH: There are 19 common names of fish amongst the letters below. Some read correctly, horizontally left to right - some are upside down, some diagonal and backwards. See how many you can find. Granted, this is a space filler in this month's issue -- but if you enjoy it, let me know and I can include such a puzzle every once in a while -- maybe we can even award prizes for correct solutions. Editor, P.S. - I'll bring the solution to the September meeting.

B U S T W P A G O B Y A S A R T
 T R Y I I R S E R D E R C B U S
 Z T S M P O A A R E P T R F N G
 X N B A V M B C L B L E T I H V
 U Q O R M N U A K L P T P A W R
 T U K U W L I R C A E U S M T S
 R N I O I N A D Q C B G B A N C
 U O L G U E E I D H D J N O R C
 P C L T O C E N H S I F G A L F
 W E I N D O P A F I F Q U G I G
 H L F A U D R L P F D U P I E I
 F I I N O N T G L H H P H M Z
 S A S G B M G E I I J N Y Y L N
 F T H S O L F T K C F O T N L I
 O D A G L P I R A N H A B I Y F
 P R M A H T M A G E L R M S R H
 G O J A C K D E M P S Y S H G A
 E W E D R I D F E C X L B S G E
 D S H W E C C E L E D M J F K H
 G O C H F E I H B K N C M J L I
 P R M B A L I S L C S I T D U A
 H W T E U I A O G I F E N D C B
 B A N A I U J L D M D I P N B A



The hammerhead says
if he can solve it, any-
one can.

PVAS BOWL SHOW RESULTS, AUGUST, 1978

CICHLIDS

Central/S.A. Medium

- 1st - Fazil, B. - Convict
- 2nd - Fazil, B. - Blue acara
- 3rd - Warren, K. - Green Terror

Other Riftlake

- 1st - Warren, K. - H. oxyrhynchus
- 2nd - Warren, K. - J. marlieri
- 3rd -

Open

- 1st - Fazil, B. - Ram
- 2nd - Fazil, B. - A. curviceps
- 3rd - Fazil, B. - A. curviceps

Judges: P. Tietgen, Harrell, C.

EGGLAYER/LIVEBEARER

Livebearers

- 1st - Herrell, C. - HiFin Lyretail Sword
- 2nd - Herrell, C. - Cobra guppy
- 3rd - Elko, V. - Red Brick Sword

Killifish

- 1st - Hoffman, G. - Ps. annulatus
- 2nd - Hoffman, G. - A. Bivittatum
- 3rd - Hoffman, G. - Chocolate australe

Open

- 1st - Elko, V. - Rosy Barb.
- 2nd -
- 3rd -

Judges: Trout, B., Best, D.

MONTH QUARTER ANNUAL

Fazil, B.	22	22	44
Warren, K.	14	14	35
Griffin, W.	0	10	16
Neese, G.	0	14	14
Garvey, J.	0	0	10
Elko, V.	0	6	6
Harrell, C.	0	0	4
Prendergast, M.	0	1	4
Dickens, S.	0	0	3
Whitesell, G.	0	0	2

MONTH QUARTER ANNUAL

Fazil, B.	0	12	59
Harrell, C.	12	19	31
Hoffman, G.	12	12	25
Garvey, J.	0	0	20
Elko, V.	10	18	19
Prendergast, M.	0	3	17
Griffin, W.	0	6	16
Mahoney, P.	0	0	13
Whitesell, G.	0	9	12
Lenzen, M.	0	0	10
Whitesell, A.	0	0	6
Merrell, M.	0	0	2

bap
REPORT

<u>NAME</u>	<u>POINTS</u>
Jan & DaveMcInturff	405***
Ruth Brewer	270**
Susan & Mike Sprague	165**
Joe Paull	150**
Gerry Hoffman	115*
Bev Fazil	100*
Gene Aldridge	80
John Jessup	55*
Pat & Maggi Mahoney	50*
Pat Tietjen	15
Jerry Donnelly	10
Woody Griffin	10



Breeders &
Bowl show
participants
we salute
you!

Recent spawnings: Woody Griffin, Angelfish

- * Breeder Award
- ** Intermediate Breeder Award
- *** Advanced Breeder Award