DEETA JACE

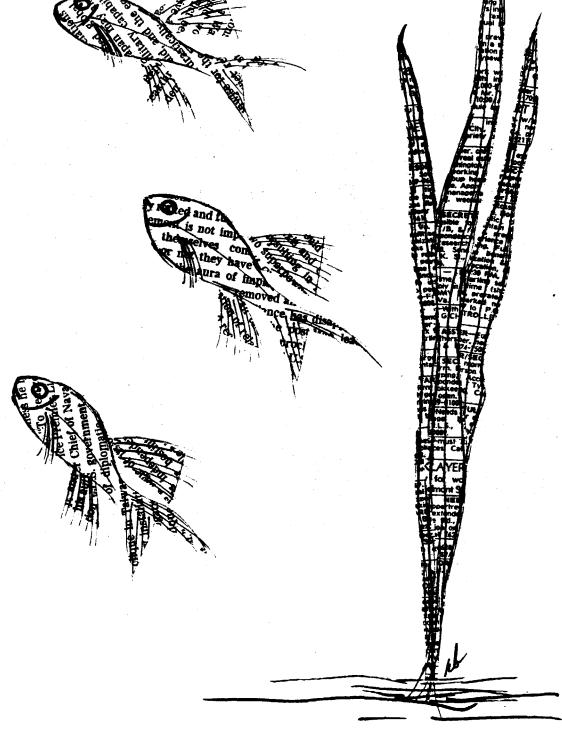
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OCTOBER 1977

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ISSUE 10



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DELTA TALE is published for the benefit of the Potomac Valley Aquarium Society (formerly the Potomac Valley Guppy Club), a non-profit organization, established in 1960 for the purpose of furthering the aquarium hobby by disseminating information, encouraging friendly competition, soliciting participation in its show, and promoting good fellowship. Correspondence should be addressed to Secretary, P.V.A.S., P.O. Box 6219, Shirlington Station, Arlington, Virginia, 22206. Original articles and drawings may be reprinted if credit is given the author and DELTA TALE. Two copies of the publication in which the reprint appears should be sent to DELTA TALE which will forward one copy to the author. All materials for inclusion in the DELTA TALE must reach the editor no later than the Saturday after the monthly Monday meeting.

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Editor: Dana Skibbie Best

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BOARD OF GOVERNORS

John Jessup Craig Tingen
Heinz Lenzen Susan Sprague
Pat Mahoney Warren Garner
Steve Siska Pat Tietjen

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This month's cover is a collage of newsprint by Ruth Brewer.

MINUTES OF THE BOARD OF GOVERNORS MEETING

The Board of Governors met September 6 at the Aldridge home with eight members present. The Treasurer reported a bank balance of \$318.36 with no outstanding bills.

Dave McInturff reported that the October dinner/auction flyer had been typed by Maggi Mahoney and he also delivered 900 copies to be enclosed with the Delta Tale and the balance to be distributed by PVAS members. Ruth Brewer said that mailing labels for our usual lists would be completed within a week.

Gene Aldridge moved that, since we only need one relatively large item for the dinner door prize and five or six small items for drawings during the auction, we take a passive approach to soliciting and buy additional items if needed. Pat Mahoney seconded the motion and it was carried.

Gene Aldridge brought up a question from Ed Taylor as to program content for the dinner talk. It was voted by the Board to ask Ed to discuss "Interrelation of Aquarium Fishes", keeping his talk to approximately 45 minutes to one hour.

Dave McInturff reported on the recent meeting of the BAP Committee. His report was accepted and the changes in the rules will be printed in the October Delta Tale.

Gene Aldridge moved that Jan McInturff be asked to chair the nominating committee, Ruth Brewer seconded the motion and it was carried.

Gene Aldridge suggested that each committee chairperson write up a description of his/her duties for discussion by the Board at meetings during the balance of the year. Gene agreed to work up the descriptions into a form which can be used for future guidance.

The Board meetings for the balance of 1977 will be held as follows:

October 4 - Pat Mahoney November 1 - Steve Siska December 6 - Pat Tietjen

The meeting adjourned at 10:10 p.m.

Respectfully submitted, Ruth Brewer, Recording Secretary

Revised September 1977

BREEDER'S AWARD PROGRAM

The Potomac Valley Aquarium Society has established a BAP (Breeder's Award Program) to encourage members to breed fish and to share with others the knowledge they have gained. The Program is open to all members (except corresponding members) and there is no time limit on breeding a particular fish. You proceed at your own pace. Awards are given as detailed in the rules. To get started all you need is a pair of fish, something to keep them in, and a Breeder's Award Form to fill out. Read the rules that follow and you are on your way.

If you have any questions, please don't hesitate to call one of the Breeder's Award Committee members. The handy forms to record spawnings can be obtained from any Committee member at the regular meeting.

The Committee members are:

Chairman

Dave McInturff (941-1962)

Mon:	tgo	mery	Coun	ty

Bowie/Bel Air

Ted Walsh (277-8249)

Steve Siska (261-7923)

Fairfax County

Alexandria/Arlington

Ruth Brewer (893-6997) Pat Mahoney (534-0006) Gene Aldridge (931-7426) Susan Sprague (841-0857)

Springfield

Ft. Belvoir

Dave McInturff (941-1962)

Dana Best (960-1686)

Herndon/Reston

Gerry Hoffman (437-9631) Jim Long (860-1345)

If you have a spawning which needs verification, contact the Committee member nearest you. If, after a few trys, you are unable to contact the person nearest you, contact the next nearest. It is your obligation to see that you contact one of the Committee members to verify your spawning.

A copy of the spawning report is attached. This report should be as complete as possible when filing for points. It is to be filled out in duplicate. Forms may be obtained from any Breeder's Award Committee member.

POTOMAC VALLEY AQUARTUM SOCIETY BREEDER'S AWARD PROGRAM

Purposes:

The purposes of the Breeder's Award Program are:

- 1. To promote the keeping and breeding of tropical fish,
- 2. To recognize outstanding achievement in the breeding of aquarium fishes,
- 3. To encourage research into the spawning of the more difficult species, and
- 4. To make accounts of successful spawning techniques available to club members through the Delta Tale and/or the general meetings.

Eligibility:

All members are eligible for the Breeder's Award Program except corresponding members.

The Program:

The Program is made up of five (5) levels of competency. They and their requirements are as follows:

- 1. BREEDER AWARD Has attained 50 breeding points from categories 1 through 10.
- 2. INTERMEDIATE BREEDER Has attained Breeder status and a total of 150 breeding points.
- 3. ADVANCED BREEDER Has attained Intermediate Breeder status and a total of 300 breeding points.
- 4. MASTER BREEDER Has attained a total of 500 breeding points, plus has spawned at least one species from each of three categories on the difficult or target species list.
- 5. GRAND MASTER BREEDER Has attained Master Breeder status and has spawned at least one additional species from the target species list over and above those spawned for Master Breeder status.

Acknowledgement:

Attainment of any of the five levels will be recognized in the <u>Delta Tale</u> and at the general meeting. Awards will be presented at the regular monthly meeting for all five levels of achievement.

Requirements:

- 1. Breeding points are awarded by proof of spawning of fish in of 17 different categories. Points may be gained only once from each species.
- 2. Spawning is defined as raising of at least ten (10) fry to sixty (60) days of age after hatching. Mouthbrooder eggs are considered hatched seven (7) days after breeding. If sex is readily determinable, two pairs must be included in the 10 fry.
- 3. Breeding is defined as the physical act of mating. A mating of killifish is considered to be the total quantity of eggs deposited during a one-week period. All fry hatched from the one-week spawn are counted for the purpose of satisfying the requirements of the BAP. The final verification date would be 60 days after hatching.

- 4. Eggs must be spawned by the breeder's own fish, not obtained from another breeder and then hatched.
- 5. Any fish not included in the first 16 categories or which you feel is not adequately covered in existing categories will be assigned points by the BAP Committee upon written request. This request must be made prior to awarding of points. The attached Special Category Form is to be used for this request.
- 6. Following a successful spawning, it is the breeder's own responsibility to see that his points have been properly recorded.
- 7. The requirement for ten (10) fry can be waived by the Committee for a fish which produces spawns of less than that number. The Special Category Form should be used for this request.
- 8. There is no intent under this program to require the tearing down of a tank to look for eggs. The sight of free swimming fish can be used as a trigger to start reporting. These provisions apply to substrate spawners. Questions in this area should be referred to a Committee member for resolution.

Proof of Spawning:

Proof of Spawning is defined as follows:

- For all categories, submit breeder's award form to the BAP Committee.
 Any spawning claims may be investigated at any time by the Committee.
- 2. The first verification and inspection for all categories of breeding phase must be performed within 10 days of mating (for killifish, beginning of hatching) by a visit to your home. For 10-point fish this can be done by a member in good standing; for all other categories this must be done by a BAP Committee member.
- 3. The second verification and inspection for all categories must be done by a BAP Committee member. The fry must be 60 days old at the time of inspection. If you wish, the 10 fry may be brought to a general meeting.
- 4. The entrants, for 15-point and above categories, must submit a summary of spawning procedures, either orally at a regular general meeting or written for publication in the Delta Tale.
- 5. The entrants, for 25-point and above categories, in addition to the above, must notify a BAP Committee member within 48 hours of breeding (or beginning of hatching for bottom-spawning killifish).

Function and Authority of Committee:

The Committee shall oversee and enforce all rules and regulations governing the Breeder's Award Program. Among these are verifying and awarding points to qualifying members, keeping proper records of awards, making proper awards to qualified members, reviewing the rules and regulations at least once a year for possible improvements, and reporting to the Board of Governors.

Changes and Modifications of the Rules:

From time to time the Committee may feel that certain changes or modifications in the rules may be advisable. The Committee will adhere to the following procedures should it wish to make any changes or modifications. No changes or modifications will be retroactive.

- 1. A date for the change or modification is chosen by the Committee.
- 2. The proposed change with the effective date will be published in a conspicuous manner in the Delta Tale at least three months preceding the effective change.
- Special rulings or category changes should be made in writing on the Special Category Form. The requester will be notified in writing of the action taken. All changes or clarifications will be available to all members.

Points or Awards Earned by Committee Members:

Any member of the Committee wishing to claim points must secure confirmation in the approved and customary manner. In addition, he must secure the confirmation of at least two members of the Breeder's Award Committee, in the case of the Difficult and Target Species.

1977 BOWL SHOW CATEGORIES

CICHLIDS

OTHER EGGLAYERS/LIVEBEARERS

October

Angelfish

Tilipia/Seratherodon

Malawian, non-mbuna, non-haplochromis

Catfish, non-corydoras Guppies

Sharks/Loaches

November

Haplochromis

Mouna, non-pseudotropheus

0pen

Tetras Characins Open

NOVEMBER IS FOR DOUBLE POINTS

December NO BOWL SHOW-CHRISTMAS PARTY

Categories:

The 17 categories and their breeding point values are as follows:

Category 1. - 10 points - Any species of livebearing fish except as indicated elsewhere.

Category 2. - 10 points - All mouthbrooding cichlids (African and New World) except as indicated elsewhere.

Category 3. - 10 points - Any species of cichlids except as indicated elsewhere.

Category 4. - 10 points - Goldfish, koi, white clouds, or any species of danio or brachydanio.

Category 5. - 10 points - Any species of barbs.

Category 6. - 10 points - Any killifish that is not a bottom spawner.

Category 7. - 15 points - Any species of anabantoid other than Chocolate or Kissing gouramis.

Category 8. - NOT USED.

Category 9. - 15 points - Any species of fish known as dwarf cichlids.

Category 10.- 15 points - Any endemic rift-lake substrate spawning cichlids except as indicated elsewhere.

Category 11.- NOT USED.

Category 12.- 20 points - Any species of catfish except as indicated elsewhere (includes bristle-nosed plecostomus).

Category 13.- 25 points - Any species of bottom-spawning killifish.

Category 14.- 25 points - Any species of characins except as indicated elsewhere.

Category 15.- 30 points - DIFFICULT SPECIES (See following).

Category 16.- 50 points - TARGET SPECIES (See following).

Category 17.- Various - Special assignment fish.

The DIFFICULT SPECIES LIST is a list of species whose spawnings have been recorded, but can still be considered rare or difficult. At the present time the categories are as follows:

- 1. Any species of Discus (Symphysodon).
- 2. Neon Tetra (Hyphessobrycon innesi) or Cardinal Tetra (Cheirdon axelrodi).
- 3. Kissing Gourami (Helostoma temmincki).
- 4. Any species of Silver Dollar or Piranhas (Serrasalmus, (Rooseveltiella, Pygoncentrus, Metynnis, Mylossoma or Myloplus).
- 5. Any species of Rasbora.
- 6. Any species of Puffers (Tetraondontidae).
- 7. Any species of Whiptail Catfish (Loricaria).
- 8. Butterfly fish (Pantodon buchholzi).
- 9. Any species of Leaf fish (Monocirrhus, Polycentropsis, or Polycentrus).
- 10. Any species of Half-beak (Hemiramphidae).
- 11. Four-eye (Anableps tetrophthalmus).
- 12. Any species of Sticklebacks (Gasterosteidae).
- 13. Spotted Headstander (Chilodus puntatus).
- 14. Chocolate Gourami (Sphaerichthys osphromenoides).
- 15. Oscars, Red devils, Severums.
- 16. Non-designated species (a difficult species of the breeder's choice may be substituted for one of the above 15 categories. In order to qualify a species for this award, the breeder must submit a written request to the Committee for approval prior to awarding points. Reasons must be provided). This category can be used more than once in attaining the Master Breeder Status.

The TARGET SPECIES LIST is a list of aquarium species whose spawnings have not been reliably reported by the home aquarist.

At the present time the list is as follows:

- 1. Red-tailed Shark (Labeo bicolor).
- 2. Any species of Loricariidae except whiptail catfish and bristle-nosed plecostomus.
- 3. Any species of loach.
- 4. Glass Catfish (Kryptopterus bicirrhus).
- 5. Any species of Scats (Scatophagus).
- 6. Any species of Headstanders (Anostomidae) except Chilodus punctatus.
- 7. Any species of fish naturally found exclusively in salt water.
- 8. Any species fo Hatchet fishes (Gasteropelecidae).
- 9. Any species of Glass fishes (Centropomidae).

bap REPORT

NAME	POINTS
Susan & Mike Sprague	155**
Ruth Brewer	260**
Gene Aldridge	80
John Jessup	55*
Diane Nixon	70*
Pat Tietjen	15
Jan & Dave McInturff	395***
Jerry Donnelly	10
Gerry Hoffman	25
Joe Paull	15
Pat & Maggi Mahoney	10

Spawnings:

Brewer: Pachypanchax playfairi, Pseudepiplatys annulatus

McInturff: Labeotropheus trewavasae

Paul: Apistogramma cacatuoides

Mahoney: Epiplatys dageti

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

BREEDER'S AWARD FORM

INSPECTION DATES: month da	ay year CLASSIFICATION No.:POINTS:
BREEDING DATE	NAME OF FISH:
	OF SPAWNING COMMON
NAME (Please print) DATE C	OF FREE SWIMMING TECHNICAL
CONDITIONING OF BREEDERS: agetemp	
size tank size	time color
food	
INFORMATION ON BREEDING: tank size pH	CARE OF FRY: tank size temp.
no. of males	moved food
no. of females	
SPAWNING REPORT SUBMITTED: Y (To be filled in by Breeder's	ZES NO NOT REQUIRED PRINTED Award Chairman) DATE
cedure, including removal of b tion such as minimum time betw	CATE. Use bottom of form for propreders, and for any general information spawnings, filter used, sand, ther helpful information. If additional

BREEDER'S AWARD PROGRAM

REQUEST FOR SPECIAL CATEGORY ASSIGNMENT (2 copies)

rechnical name common name	
Current Category	Points
Requested Category	Points
Reasons-(Show specifically why t	this fish is in the wrong category):
· · · · · · · · · · · · · · · · · · ·	
1	
	Name (Signed) (Date)
BAP Committee Action <pre>Member</pre>	Approved Disapproved
Final Action	
Requester Notified	In Delta Tail
	Coordinator



WAVES FROM THE CORAL REEFS

By Gay Semans, PVAS

SEA ANEMONES

Most people think that a sea anemone is a never-moving animal. Deep-water forms seldom have reason to change locations once they have reached adult-hood and settled down. Only a few are unable to move at will from one site to another. Among the more common forms, many anemones choose a home site of attachment in a cranny, a depression in the ocean floor, a rocky cove or other favorable area and stay there indefinitely. Other types are on the move constantly, rarely settling in one spot for any appreciable length of time.

The most common means of movement among anemones are either a creeping movement accomplished by gliding over surfaces or a complete loosening of the disc so that the anemone is carried along by movement of the water. A few species appear to inflate their body cavity to assist in movement. The so-called burrowing anemones anchor themselves in the sandy or silty floors of mud flats, but even these types are capable of movement. Specimens removed from their anchorage have been observed to reinsert themselves promptly in the bottom by means of a series of jerky motions. There are a few unusual anemones, nearly always found in cold water, that swim vigorously by lashing their tentacles to and fro in the water.

The body plan of the sea anemone is surprisingly simple; it has the characteristics to which the term "polyp" has been applied and is the same general structure found in related groups, particularly the various kinds of coral animals.

The most outstanding characteristic of the sea anemone is its tentacles. These are continuations of the mesantaries and, in the expanded state, are smooth, simple, unbranched structures that are generally capable of great expansion. The tentacles and disc can usually be retracted and hidden from view by drawing in some of the upper part of the animal's body or column. The anemones, however, are entirely incapable of retracting either their tentacles or their disc. Whatever the shape, size or type of tentacles all anemones share one thing in common—they possess a mechanism for manufacturing and dispensing venom that is potent enough to stun and sometimes kill live prey.

The poison dispensing apparatus consists of a nearly countless number of complex stinging cells and so-called adhesive cells all of microscopic size which are embedded in the surface tissue of the tentacles. Release of the adhesive cells serves to immobilize and hold the prey about to receive a broadside long enough for the stinging cells to penetrate and anesthetize or kill the prey. Although the venom of some tropical anemones may be hazardous to humans, the majority of species may be handled safely.

So, if you are one of those persons who would like to keep a minature ocean in your home but fear you lack the know-how to cope with a community of marine fishes, why not set up an "anemonarium"--a home for sea anemones. These flower-like animals will survive fluctuations in temperature, salinity and pH more readily than many other sea animals. They require no special diet, may be maintained in as little as a gallon of sea water, never appear to grow old, and if given any kind of care at all, could probably live far longer than their keepers. As a bonus, if anemones are not available in the natural colors desired, some species may be tinted or dyed to match a mood, suit a fancy, or fit in with the decor of the room in which the anemonarium will be placed,

ELECTION '77

The nominating committee met at Pat and Maggie Mahoney's home on Sunday, September 18, 1977, to select the slate of officers and two board members for the election in November. The committee consisted of these members:

Chairwoman: Jan McInturff

Maggie Mahoney Susan Sprague

William Trout Gerry Hoffman

The committee nominated the following members of PVAS to serve in these positions:

President:

Pat Mahoney

Vice-President:

John Jessup

Treasurer:

Gene Aldridge

Corresponding Secretary: Mike Sprague

Recording Secretary:

Pat Tietjen

Board Members:

William Trout and Tom Lighton

THE ELECTION WILL BE HELD AT THE NOVEMBER MEETING. COME AND VOTE!!!!!!

MY EXPERIENCES SPAWNING OSCARS

Reprinted from The Scavenger Louisville Tropical Fish Fanciers, June 1977

In this article I will attempt to touch lightly on a subject that can be both highly frustrating, and if you're lucky, highly gratifying. This endeavor has taken me from periods of joyful anticipation to fits of raging anger when the thought of putting my foot through the side of one of those 55 gal. tanks was an ever-present reality. It deals with efforts to spawn a fish that unlike the KILLIFISH has no abundant variation of size. type, and coloration to choose from; unlike the DISCUS FISH whose elegant beauty and challenge bring immediate and well deserved recognition as a "master breeder" to anyone, skillful and knowledgeable enough to raise a spawn to maturity, and unlike the BETTAS has no flowing and beautiful finnage. This article is devoted to my favorite fish, the OSCAR. This OSCAR is a fish having a quality which, in my mind, overshadows all those fine piscine qualities attributed to all "those other" fish. It is a fish with a personality as individual as yours and mine. It is a fish that like a companion dog comes to recognize his master and shows obvious appreciation of his presence.

Astronotus ocellatus, or Oscar as he is commonly called in the hobby is a large South American, substrate spawning, river cichlid, attaining an average mature aquarium length of 12 to 16 inches.

For breeding purposes, I set my pairs up in bare 55 gal. tanks. Having lost 2 consecutive spawns to the gravel, convinced me that bare tanks were the only way to go. Oscars tend at times to be gluttonous and sloppy eaters making heavy filtration and frequent partial water changes an absolute necessity. Efforts are made at keeping the pH fairly constant around 6.8; however, the fish seem to be totally indifferent to moderate gradual changes in either direction. The temperature is gradually raised to 85°F where it is maintained throughout the breeding Breeding pairs are maintained exclusively on a diet of live food. Minnows and crayfish, both previously treated for parasites, are the mainstay of the diet. After roughly 2 to 3 weeks of frequent partial water changes, steady temperature, and abundant food supply, coloration intensifies in both fish. The male becomes a dark olive with black and red markings. male turns almost black with red markings. Aggressive behavior increases with frequent sessions of jaw-locking and tail slapping, followed by a cleaning of the spawning slate. About a week to 10 days before spawning, appetite shows a marked increase. seems to eat everything in sight. During this period, one pair will consume 3 dozen medium size minnows per day. The female

quickly fills with eggs which she deposits at the spawning site in what appears to be rough approximations of concentric circles. The male follows after each pass of the female displaying a large amount of body quivering and fin flaring. A decision must be made at this time as to whether to remove the eggs for artificial incubation or allow the parents to raise the fry, particular case, best results have been obtained by allowing the parents to naturally incubate the eggs. The adult fish, as a rule, make excellent parents constantly fanning the eggs and guarding the newborn fry. The only drawback to this method seems to come in removing the fry. The parents will actually jump out of the water trying to bite your hand if they feel that the fry are threatened. In my efforts to remove one spawn, the male of the pair broke the surface of the water biting my index finger and holding on for what, at the time, seemed nearly an hour drawing a small amount of blood. Although no real damage was done. the next hour was spent taking a shower, changing clothes, and trying to regain my general composure. One word of caution: the eggs are removed for artificial incubation it should be to at least a 30 gal. tank as spawns are large and are heavy eaters and if anything smaller is used ammonia poisoning can occur too quickly to be remedied. During the period when the parents are guarding the fry, they go off food for a period of about 2 weeks. After this time they accept only occasional food and seem to regain their full appetite only in preparation for the next spawn. A newly hatched spawn will consume copious amounts of newlyhatched brine shrimp and their survival and growth rate seems wholly dependent on its availability. A spawn of about 500, which is about average for my regularly spawning fish, will consume about a tablespoon of freshly hatched brine shrimp daily. This is ideally fed in three feedings. If ample food is provided, growth rate is amazingly rapid. In about 10 weeks the young are ready for removal and the parents should be getting ready to start the whole process over again.

As far as initially getting Oscars to pair off, it has been my experience and the experience of other breeders with whom I have spoken, that it is for the most part virtually impossible to get adult fish to pair off. It seems that by the time the fish reaches maturity, if he is not already mated he has become far too beligerent to accept a strange fish as his mate. Far more satisfactory results are experienced by obtaining several juveniles, raising them up together and allowing nature to take its course or in locating someone who has followed this process and is willing to sell an already mated pair.

Finally I would like to make clear that I am by no means an expert in this endeavor, having only raised fish for about 8 months. My purpose was merely to relate the methods with which I have experienced some degree of success in the hope that it might spark some interest in the keeping and spawning of my fave orite fish "THE OSCAR."

WHEN I WHINE

Author Unknown
Reprinted from <u>The Bulletin</u>
Natal Tropical Fish Club
March 1977

The other day upon a bus,
I saw a girl with golden hair,
I envied her- she looked so gayThen suddenly she rose to leaveI watched her hobble down the aisle:
She had but one leg, bore a crutch,
And as she passed she smiled,
Oh God forgive me when I whineI have two legs, the world is mine.

Later I paused to buy some sweets,
The lad who sold them had such charm,
I stayed to talk to him a while:
If I were late 'twould be no harm.
Then as I turned to leave he said
"Thank you, you have been so kind.
I like to talk with folks like youYou see, I'm blind"Oh God forgive me when I whineI have two eyes, the world is mine.

Still later passing down the street, I saw a child with eyes of blue: He stood and watched the others play, It seemed he knew not what to do. I stood a while and then I said: "Why don't you join the others, dear? He looked ahead without a word. And then I knew he could not hear. Oh God forgive me when I whine—I have two ears, the world is mine.

TWO LEGS TO TAKE ME WHERE I'D GO, TWO EYES TO SEE THE SUNSET'S GLOW. TWO EARS TO HEAR WHAT I WOULD KNOW.... OH GOD FORGIVE ME WHEN I WHINE I'M BLESSED INDEED, THE WORLD IS MINE.

BOWL SHOW REPORT FOR SEPTEMBER 197?

CICHLIDS

CENT. & S. A. DWARF 1st Hoffman, G.--A. reitzigi

2nd - - 3rd - -

OTHER AFRICAN

1st Hoffman, G.--P. taeniatus 2nd Warren, K.--Jewelfish 3rd Warren, K.--Jewelfish

OPEN

1st Warren, K.--Peacock 2nd Warren, K.--Ps. ornatus 3rd - -

EGGLAYERS/LIVEBEARERS

LIVEBEARER, NON-GUPPY

1st Mahoney, P.--Green Swordtail 2nd Brocato, M.--Green Swordtail 3rd Mahoney, P.--Mosquitofish

KILLIFISH

1st Mahoney, P.--A. gardneri 2nd Mahoney, P.--R. occidentalis 3rd Mahoney, P.--A. australe

OPEN

1st Brocato, M.—Silver Dollar 2nd Garrett, R.—Ct. kingsleyi 3rd Mahoney, P.—Ryukin

	MONTH QUA	RTER	ANNUAL
Warren, K.	16	52 *	139
Terwilliger, J	• 0	0	12
Sprague, S.	0	0	10
Lensen, M.	0	0	6
Dickens, S.	0	0	L
Hoffman, G.	12	12	12

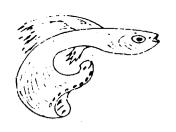
	MONTH QU	ARTER	ANNUAL
Mahoney, P.	21	32	88
Carrett, R.	8	<u> 4</u> 3#	76
Brocato, M.	11	13	32
Morrison, W.	0	Ō	20
Mahoney, M.	0	0	11
Donnelly, J.	. 0	0	2
Lighton, T.	Ö	14	34
Heflen, T.	0	Õ	10
Trout, B.	0	0	6
Terwilliger, J.	Ō	ō	1
Lembke, A.	0	Ř	17

*Quarterly award

Judges: Aldridge, G. and Sprague, S.

*Quarterly award

Judges: Brewer, R. and Hoffman, G.



POTOMAC VALLEY AQUARIUM SOCIETY PO BOX 6219, SHIRLINGTON STATION ARLINGTON, VIRGINIA 22206

	Date		19
•	APPLICATION	FOR MEMBERSHIP	
NAME			
STREET			
CITY		STATE _	
PHONE		ZIP CODE _	
Number of tanks			
Type of fish	·		
Time in hobby	· · · · · · · · · · · · · · · · · · ·		
Fish you have spawned			
What you would like to do in this Club?_			
Which sub-group inter you? (guppy,cichlid,			
How long do you plan	to be in this	s area?	
Occupation	•		
Membership dues for t	the Potomac Vo	alley Aquarium So	ciety are:
Family \$ Individual \$	10.00	Corresponding Junior (under 18)	\$5.00 \$3.00

Completed applications accompanied by your check or money order should be mailed to P.V.A.S., P.O. Box 6219, Arlington, Virginia 22206.

Please attend our meetings at the Cocoa-Cola Bottling Plant, 5401 Seminary Road, Alexandria, Virginia at 8:00 P.M.