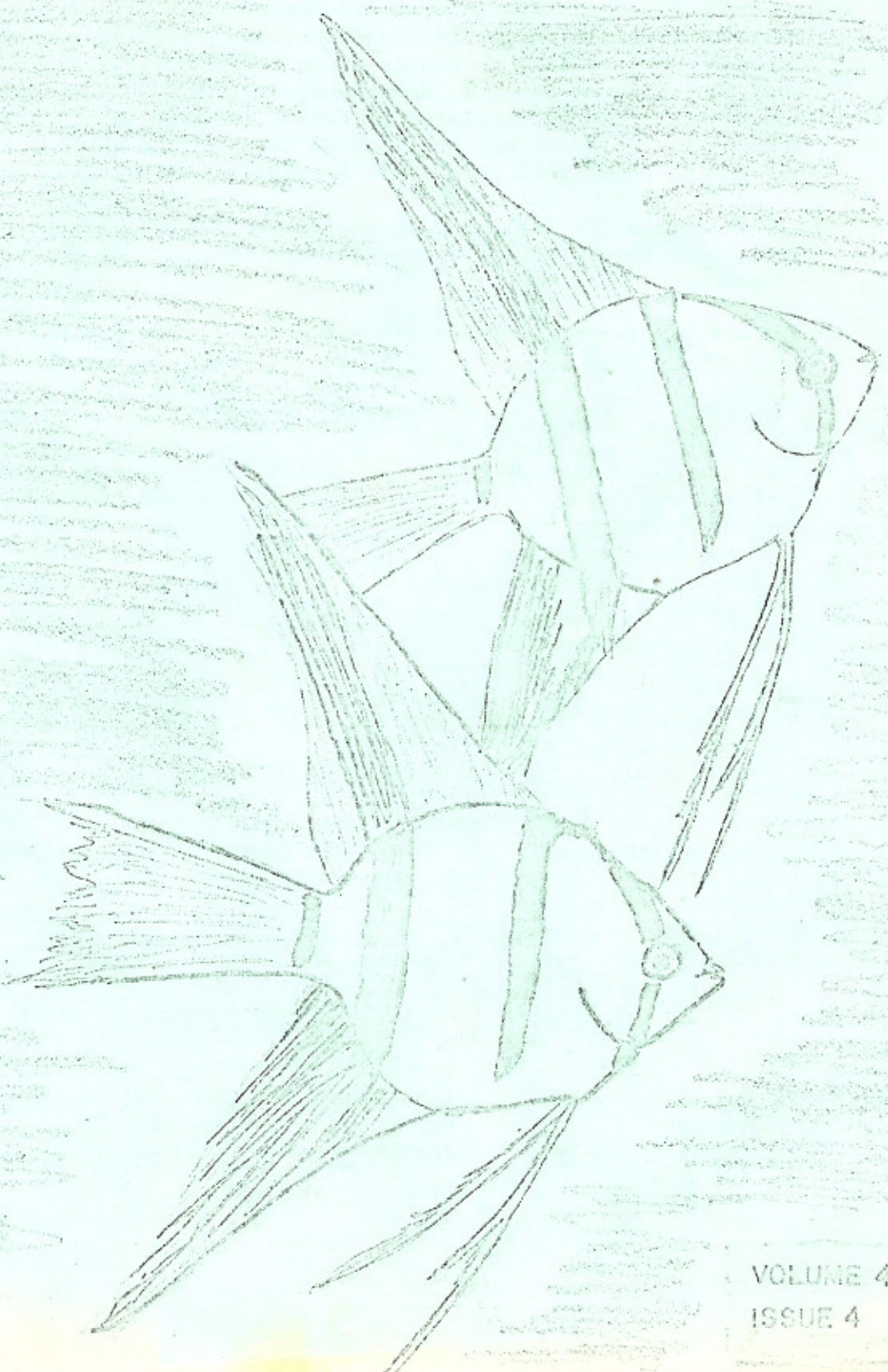


DELTA TALE

OFFICIAL PUBLICATION OF P.V.A.S.

APRIL 1973

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VOLUME 4

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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 shows, and promoting good fellowship. Correspondence should be addressed to Secretary, P.V.A.S., P.O. Box 6067, 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.

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1973 MEETING DATES

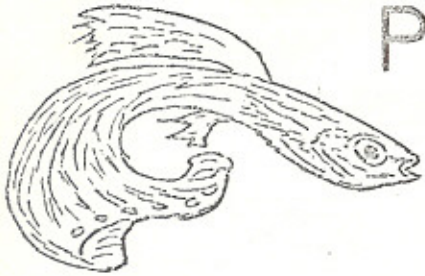
Jan 8	Apr 9	Jul 9	Oct 8
Feb 12	May 14	Aug 13	Nov 5
Mar 12	Jun 11	Sep 10	Dec 10

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COVER

Our cover this month of a pair of angelfish as well as all other artwork in this issue is the work of our young artist Henry Pettingill.



POTOMAC VALLEY AQUARIUM SOCIETY

FROM THE PRESIDENT

The issue of the ban on importations of fish into the U.S. was discussed at length at the Cichlid group meeting last Wednesday night. We were fortunate that Ed Taylor was in town and able to attend. He gave a good run-down on his involvement in the situation caused by the actions of one or more senior officials in the Department of Interior in implementing the provisions of a law initially enacted in 1900. It was only through the persuasive reasoning of a few level-headed individuals, Ed and Dr. Rofen of Kordon included, that total disaster was averted. As it is, a number of species of fish will probably be banned almost immediately with the insidious possibility of more to come. There is no question whatsoever as to the need to protect those species, such as the Arowana, that are endangered through depopulation by collectors. At the same time, the presumption that prohibiting importation will save those species of killies being overrun by human encroachment in their habitats is illogical.

My personal suggestion is that each of you exercise your right of communication with your Congressional representatives requesting them to seek information from the Under Secretary of the Interior, Mr. Nathaniel Reed, regarding the future of our hobby.

At our April meeting I will fill you in on the Federation of American Aquarium Societies as it was explained to us.


JOHN E. JESSUP, JR., Ph.D.

EDITORS' NOTE

It's good to see an issue with all our own contributions. Thanks to Joel Goodman on African cichlids, Heinz Lenzen on tubifex, Sue O'Meara on the Southeastern workshop, and Pauline Sergent on guppy judging and show information, we have pretty fair representation on parts of the hobby. In addition, Dick Baker and Mike Sprague have improved reporting on membership and ways/means. We need continued help from all those who have started or offered articles, and hope to get articles on all aspects of the hobby. We plan to get a "beginner's corner" started with basic articles on equipment, fish selection, and ways to avoid problems in starting into the hobby or a new branch of the hobby. If you come upon an interesting subject, why not suggest it to us, or better yet, write it up yourself?

Don and Linda DeRoze

April Club Announcements

1. The Cichlid Club will meet at Mike & Sue Sprague's house at the address below on April 18, 1973 at 8:00 pm. Call if you need directions.

Mike & Sue Sprague
6708 N. 18 Street
Arlington, Va.
534-7487

2. The Guppy Club will meet on Friday, April 23, 1973 at 8:00pm. For the home information call John Wolcott at 262-4213.
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TRADING POST

We have several fluorescent "Fish Glo" bulbs F-15T8 (17" long) which we no longer need. Anyone wanting them (free), call the DeRozes at 384-5568.

MEMBERSHIP AND THINGS

April Again ??! The month of spring showers and income tax returns. Don't you wish all those "dependent" fish were deductible?

Are you interested in a CICHLID POWER bumper sticker or badge? If so order yours from Gary Bartell, 733 N. George St., York, PA., 17404. The stickers and badges are priced at 25¢ or 5 for \$1.00. Mix them any way you like. Send a self-addressed stamped envelope with your order. When ordering bumper stickers, send an envelope large enough to accommodate 4" by 7½".

There are seven memberships that expire this month.

Marcus Daly II
Chuck Grether
Ken Raab
G.D. & J.E. Ricketts

George & Ann Marie Scherrer
Roger Sowards
Bob Throop

As usual, please fill out the membership application and bring it with your dues to the April meeting or mail both to P.V.A.S., P. O. Box 6067, Arlington, Va. 22206.

And now to the WELCOME CORNER.

MARVA & PINCHOS ANDREEN have three tanks and raise a variety of fish. Pinchos has spawned zebras and is interested in spawning additional species. Pinchos is a computer specialist and the Andreens are residents of Springfield, Va.

Welcome Back BILL CUNNINGHAM! Bill has been in the hobby for 10 years and is one of our more avid guppy fanciers. He has been away from the club for several months but rejoined in March and was immediately put to work judging guppies in the monthly bowl show.

BOB HAYES is our newest junior member. Bob has two tanks but says he will be expanding soon. His tanks contain many varieties of fish and he has spawned mollies, swords and guppies. Bob has been in the hobby for seven years and when he is not in school or taking care of his fish he delivers papers for a local edition.

Remember the April meeting, bring a fish AND a friend!!!

Dick Baker

WAYS AND MEANS

As the new Chairman of the Ways and Means Committee, I would like to bring each of you up to date on my area of responsibility and how it affects you as PVAS members.

Our Constitution and By-Laws provides for a Ways and Means Committee composed of a chairman and two members. The Committee's primary area of responsibility is in fund raising activities. At the present time, the Committee members are Mike Sprague, Mike Sprague and Mike Sprague. Any member who is interested in becoming active as a member of Ways and Means should give me a call.

One of my major responsibilities is in the operation of the door prizes, raffles and auctions. To make these activities an outstanding attraction, we need donations of equipment, food, medicines, fish, etc. Without such donations, all prizes must be purchased from limited PVAS funds. I have contacted a number of our members and asked for donations and the response is usually favorable. I will be contacting more of you in the future, but why not beat me to the punch and volunteer.

I plan to make this article the first of a series of quarterly articles which are designed to inform PVAS members about Ways and Means and to individually thank those members who have made donations.

We would like to thank all those members who made donations to the Ways and Means activities during the first quarter of 1973. Among those members are:

Kenneth Raab
Sue O'Meara
Joel Goodman
Mike & Susan Sprague
Dick & Etta Baker
Russell Hammond
John Corbett
Chuck & Genny Story

Mike Sprague
Chairman

SECRETARY'S LETTER

The March 12 meeting was called to order by Dr. Jessup who presented the information we have at present pertaining to the organization of an American Federation of Aquarium Societies. Of primary concern to the hobby is federal legislation against the importation of all animals into the United States, including all aquarium fish, effectively ending the hobby as we know it. Another act contains a requirement of a 90 day quarantine for fish. The AFAS would work toward counteracting such legislation, making aquarists' needs known to those supporting such bills. Also such an organization would aid in the interchange of information about shows, articles published, etc. Our club is awaiting the information which came out of the March 10 organizational meeting in Kansas City before committing our support.

Dr. Jessup then made two brief announcements concerning the present balance in our treasury of \$477.93, and the possible formation of a group interested in studying marine fishes. Anyone wanting information about such a group, contact Dr. Jessup.

The IFGA Chicago show will be held March 31-April 1. Those interested in going or sending entries should call Pauline and Gene Sergent.

The final business item was the voting on the proposed Constitution and By-Laws. There was no additional discussion, a motion to accept it was made, seconded, and passed.

Our program this month was a very helpful one. Gene Aldridge demonstrated the best ways for transporting and mailing fish. Gene stressed the following: 1) the amount of air, not water, is important (1/3 water, 2/3 air); 2) use double bags (if spiny fish, put five sheets of newspaper as a layer between the two plastic bags); 3) small styrofoam boxes, or styrofoam-lined boxes are ideal; 4) do NOT use pure oxygen or blow into it yourself, pump in air only, being careful not to fill bags too tight to allow for pressure differences; 5) don't feed fish a day or two before so water will be kept cleaner, and 6) on outside of shipping container, write Live Fish--please call _____ (name, phone) upon arrival. Our thanks to Gene for a much needed presentation.

Again our bowl show was well supported. There was good variety and many unusual fish. Thanks for your participation.

Linda DeRoze
Recording Secretary

POTOMAC VALLEY AQUARIUM SOCIETY

TABLE SHOW RESULTS & STANDINGS

MARCH 1973

▼ <u>FANCY GUPPY</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
a. Red	POULSEN	POULSEN	WALSH
b. 5 Matched Males	CUNNINGHAM	POULSEN	SERGEANT
c. AOC	SERGEANT	WALSH	SERGEANT
▼ <u>CICHLIDS</u>			
a. Cent & So (Dwarf)	DeROZE, D.	JESSUP, JN	JESSUP, JN
b. Tilapia	JESSUP, JN	JESSUP, JN	HARDY
c. Other	HARDY, C.	ALDRIDGE	JESSUP, JN
▼ <u>EGGLAYER/LIVEBEARER</u>			
a. Livebearers	SMITH	HIRSCHMAN, A.	HIRSCHMAN, A.
b. Killifish	HIRSCHMAN, A.	RAAB	HIRSCHMAN, A.
c. Other	DeROZE	HIRSCHMAN, A.	DeLECIAN

POINT COUNT

✓ <u>GUPPY</u> (19)	<u>MARCH</u>	<u>QTR</u>	<u>ANN'L</u>	✓ <u>EGGLAYER/ LIVEBEARER</u> (16)	<u>MARCH</u>	<u>QTR</u>	<u>ANN'L</u>
➔ Sergeant, P&G	10	29	29	➔ Hirschman, A.	14	34	34
Walsh	7	23	23	Shiflett, D.		14	14
Poulsen, W	11	21	21	Shiflette, A.		13	13
Wolcott		15	15	Jessup, June		8	8
Melnick, A	5	13	13	Pettingill	2	9	9
Shiflette, N		12	12	DeRoze, D.	4	8	8
Raab		9	9	Goodman		4	4
Lenzen		4	4	Hardy, Don		4	4
Cunningham	4	4	4	Poulsen		2	2
				Rushton		2	2
				Story		2	2
HIRSCHMAN, E. & RUSHTON		1 Each		Delecian	2	2	2
				Smith	8	8	8
✓ <u>CICHLIDS</u> (23)				Raab	4	4	4
➔ Jessup, Jn	14	37	37				
Hardy, Carl	9	21	21				
DeRoze, D.	7	20	20				
Hirschman, E.		11	11				
Shiflette, J		11	11				
Sprague	2	8	8				
Goodman	3	7	7				
Aldridge	5	6	6				
Story		2	2				

HARDY, D; HARDY, B; MELNICK, S; AND LENZEN 1 Each

HARDY, DAN; WHITTMAN 1 Each



APRIL 9

GUPPY: Blue, Black, AOC

CICHLIDS: Angelfish, Cent & So Am Breeding Pairs, Other

EGGLAYER/LIVEBEARER: Sharks & Loaches Other Catfish, (Non Corydoras)

QUARTERLY WINNERS

- ☉ GUPPY: P&G SERGENT
- ☉ CICHLIDS: JOHN JESSUP
- ☉ EGGLAYERS/LIVEBEARER: A. HIRSCHMAN

SHOW YOUR FISH

COMMUNITY TANK BEHAVIOR OF SOME MALAWI CICHLIDS

By Joel L. Goodman

The cichlids of Lake Malawi exhibit some interesting behavioral characteristics. The males all seem to have aggressive territorial tendencies. With few exceptions they are mouthbrooders, vividly colored, and have an astonishing array of color patterns they can assume. The species discussed below are only those the author has owned and observed continuously over several months. Hopefully, the conditions were such so as to provide some insight into their behavior.

Adult Malawis, owned by the author, have been observed in sparsely and densely populated conditions. The approach to this discussion will be to describe the events in a 125 gallon aquarium with eight square feet of bottom area. The bottom consists of a layer of fine white gravel covered with rocks providing many caves and crevices for the fish to occupy. The water had approximately one pound of aquarium salt added to it (nearly 1.3 ounces per 10 gallons). One of the most important items of concern to the hobbyist should be the population density. Iles and Fryer speak of the average lake population density as ranging from 8 to fourteen fish per square yard.¹ Making some assumptions about standard deviations, this probably means as few as five and as many as 18 fish per square yard. For aquarium purposes this translates to a maximum population density of about two fish (Malawi cichlids) per square foot of tank bottom area. A more crowded tank than this could result in a breakdown of territorial behavior, highly undesirable if the hobbyist intends to breed Malawis. It could also cause the dominant fish to eliminate some of the weaker individuals, an equally undesirable result.

With the aquarium environment described, the remainder of the article will deal with observations made over a period of six months, during which time the population changed due to some deaths in the family, as it were. At the beginning of this time period, the tank population consisted of three *Pseudotropheus auratus* (two males, one female), three *P. elongatus* (two males, one female), three *P. tropheops* (one male, two females), three *Labeotropheus fuelleborni* (one male, two females), one mottled *P. zebra*

¹Geoffrey Fryer and T. D. Iles, The Cichlid Fishes of the Great Lakes of Africa, T.F.H. Publications, Inc. Ltd., (Hong Kong, 1972).

(female), one *Melanochromis vermicivorus* (male), and one plecostomus.

The weaker male *P. elongatus* was killed within a week, presumably by the other male. The hobbyist inadvertently killed two female *L. fuelleborni* after he had removed them from the community with mouths full of eggs. In the meanwhile the dominant male *P. elongatus* and *P. auratus*, who had turned black, began to defend territories. The less dominant male *P. auratus* remained light colored. The *P. elongatus* staked out a territory about 1.5 feet by 1.5 feet. The *P. auratus* defended a territory of about 1.5 feet by one foot. By specimen standards, these were large fish, the *P. elongatus* was five inches long, the *P. auratus* was four inches. About one week after, the male *L. fuelleborni* was found dead. The *P. elongatus* male was suspected immediately because he had been observed being particularly aggressive towards that fish; presumably because the *L. fuelleborni* was blue with vertical stripes.

The male *P. tropheops* killed the larger of the two female *tropheops*. How he found time to destroy her remains a mystery as he was constantly being chased by either the *P. auratus* or *P. elongatus*, but mostly by the latter. One interesting observation is that none of these males displayed aggressive behavior toward any females, but those of their own species. In fact, if the female was carrying eggs, a male would all but ignore her.

At this time a male *P. zebra* (red top) was introduced to the tank, but he has been unable to defend a territory. Indeed, whenever he darkened, the *P. elongatus* male became very aggressive towards him. The *P. elongatus* male appeared to be the dominant fish, *P. auratus* male was second in the "pecking order," the male *P. tropheops* fourth, and the male *P. zebra*, fifth. The surprise was that the female *P. auratus* appears to be the number three fish. An interesting fact of this "pecking order" is that the largest fish is not necessarily the dominant one, as in the case of the male *P. tropheops*, who is bigger than both *P. auratus* and the *P. elongatus*. Any time the *P. tropheops* darkens, the male *P. elongatus* chases him until he lightens. A similar thing occurs when the male *P. zebra* darkens. It appears that the male *P. elongatus* will attack any fish with dark vertical band. Most aquarists who keep Malawi cichlids would concur with this. The *P. auratus* (who is black with horizontal bars) was virtually immune from attack by the *P. elongatus* and vice versa. However, the *M. vermicivorus* (blue *auratus*) is attacked by the *P. elongatus* anytime he darkens and the *M. melanopterus* is attacked almost anytime the *P. elongatus* sees him. Both these fish have horizontal stripes.

The male *P. tropheops* killed the remaining female of his species. (If anyone out there is keeping score, it's disheartening, isn't it?) Some young fish were added, a pair of *Labidochromis ceeruleus*, and a *Lamprologus savoryi elongatus*. After they learned which territories to stay clear of, they ceased to show signs of wear and tear. It is of interest to note that both these species are light colored. A large pair (five inches) of *Tropheus moorei* were added next. It was the belief of the author that *T. moorei* were capable of taking care of themselves. With this in mind they were left in the tank and the rocks moved, despite the fact that the *P. auratus* and *P. elongatus* were chasing them relentlessly. This turned out to be a mistake and the *T. moorei* were removed two hours later, unfortunately not soon enough as they died one week later from wounds received.

A large (5.5 inches) pair of *M. melanopterus* were added next. This fish is dark brown with greyish-blue horizontal stripes and yellow to bluish fins. They were evacuated almost as soon as they were put in. Some small *Haplochromis burtoni* have been added and tolerated. The second male *auratus* has been traded away. Recently, the large (five inch) male *P. elongatus* was found dead. The *P. auratus* and/or *P. tropheops* was suspected, but recent observations show that the *P. auratus* is the dominant fish, therefore it must be reasoned he was responsible.

It appears that if new fish are to be added to the community, the dominant males must feel no threat to their sovereignty if the new member is to survive. If the dominant fish are dark, the new members stood the best chances of surviving if they are light colored, so as not to challenge the color of the dominant fish. If the new fish are of small enough size so as to pose no threat, it appeared that they would be readily tolerated.

Before courtship and spawning actions observed are described, the author would like to mention that upon the death of the male *P. elongatus*, another male *P. elongatus* was purchased and placed in the tank. He appeared to be doing fine. However, two days later he was found swimming (barely) near the surface with the female *P. elongatus* picking on him. He died two days after that. The new male *P. elongatus* was only about 3.5 inches long, about the size of the female of the species. The author recommends that males of this species be larger than females if spawning is hoped for.

Both the female *P. auratus* and *P. elongatus* have spawned three times each in the last six months. Courtship

behavior has been observed in both spawning pairs. The actual act of spawning has been observed for the *P. auratus* only. Since courtship behavior is very similar for both species, spawning will be assumed very similar.

When the ripe female first entered the territory of the male (the male, if he is strong enough to defend a territory, is always ready), he arched his body in front of the female with fins spread away from her and vibrated intensely for about two to five seconds. With a flip of his caudal fin, that sometimes knocked the female back an inch or so, the male reversed his position and repeated the display. This was repeated several times (five in the observed case), during which time the female was at right angles to the male's body line. The female signified her acceptance of the male by a similar display head to tail with the male. Tail chasing ensued for about 15 seconds or so. Jaw-locking did not occur here, though it was observed between the male and female *P. elongatus*. These prenuptials lasted about five minutes. The compliant pair then sought an easily defended area of the tank, a rock sheltered corner.

The male began to display and vibrate more intensely than before. This time his fins were toward the female, instead of away from her as before. The lower part of his caudal fin and anal fin touched the tank bottom, while his head was raised about one inch from the bottom. The female assumed a head down position, perpendicular to the male's body line, with her mouth about $\frac{1}{2}$ " from his anal fin. It was assumed she was taking milt into her mouth. This position was held for one or two seconds, then the pair reversed position. The female did not vibrate as intensely as the male and her ovipositor was barely visible as she laid three eggs. This procedure was performed 14 times in all, the female taking the eggs into her mouth, along with additional milt, on each subsequent position. The male interrupted the process several times to chase away some would be interlopers, a *M. melanopterus* and a *M. vermivorus* that got too close. The female waited patiently in a level position. When the male returned, which he did quickly, they resumed the process. There did not seem to be any signal between them to signify the end of spawning. The female simply swam away (which itself might be taken as a signal) and avoided the male thereafter. From this point until the female was taken from the tank, the male ignored her whenever she swam into his territory. From one to three eggs was deposited on the substratum each time the female vibrated.

The female was separated and eventually delivered 32 fry about $\frac{1}{2}$ " long, complete replicas of herself. When her

mouth sack had darkened, the author commenced placing food in the tank. Apparently, she would release the young behind a rock, eat, then take them back in her mouth when danger threatened (ie. The author was near her tank.) The food was always gone the next day. She eventually released the fry, refusing to take them back. Well fed for about a day after she released them, she did no harm to any of her fry. However, the author, not willing to press the matter, removed the female to a recuperation tank where she was well fed for about ten days and returned to the community. From spawning to final release was 33 days.

After the females were released in the community tank, the males made an initial attempt at courtship, and then gave up the idea for a while. The female must have given some signal (which the author did not catch) saying she was not ready to spawn. The behavior of this aquarium was typical of other tanks the author has maintained that were not overcrowded.

The results of maintaining an overcrowded aquarium were no spawning, much fin damage, and death in extreme cases. Weaker specimens rarely survived. The main differences between the overcrowded tank and the correctly maintained (in terms of population) tank was that in the overcrowded tank there was no spawning and a constant nipping and chasing of one another. The overcrowded fish were crowded nine adults in a twenty gallon long (12" by 30"), more than three fish per square foot. These same fish when released in an 85 gallon aquarium, showed less fin damage and some of them spawned after one week in the larger aquarium. The spawning can be attributed to new water as well as larger quarters.

It is the author's opinion, that for a maximum spawning rate, and fish in good condition, Malawi adults should be given plenty of room to indulge their territorial whims. If you don't cut down the population, they may decide to do it themselves. Two male *P. elongatus* cannot occupy the same aquarium with a female present. In the wild the weaker one is chased away, but in the confines of an aquarium, he is killed. The color phases of some of these fish are startling in their differences. This topic deserves a separate article, and should probably be handled one species at a time. Other species, including the "roung-nose auratus" and "gold auratus" have been in the 85 gallon tank for about one month. The "gold auratus" have spawned at this writing and several other species appear ready to spawn. The author's hope is that the behavior of this tank will be the subject of a future article.

WINTER WEEKEND WORKSHOP

By Susan P. O'Neara
PVAS & AANCA

The second Southeastern Winter Weekend Workshop was held on February 9, 10, & 11, 1973 in Memphis, Tennessee and was hosted by the Mid-South Aquarium Society. Tad Damon (of AANCA), Gene Aldridge (PVAS & AANCA), and I were fortunate enough to attend, making the sixteen hour drive each way from the Wash., D.C. area. This proved to be the "funnest" weenend ever...as my four year old would tell you. (NO, she didn't go...half the fun was leaving all the children home).

It was a very "fishy" weekend, too; what else? We left Thursday night after packing fish into plastic bags and styrofoam cartons for the trip down and feeding one last time those fish left home. Taking turns behind the wheel (yes, they let me drive, too), we drove all through the bitter cold night...through snow flurries and (around) trailer trucks, up and down hills, heading southwest to Memphis, with much anticipation.

And after we arrived, we were too excited to rest as planned prior to the evening festivities. After a second breakfast we set out to scour the town for all the fish stores we could find to see what they had to offer. We did find a few things to interest us. (I got some gorgeous double-tail Cambodian bettas).

Friday night featured registration, a presentation on Marine Aquarium Systems and a get-together in the hospitality room...which I hear went on until the wee hours...we flaked out before that. I talked to a lot of marvelously interesting people...main topic: fish, of course.

Saturday gave us workshops in guppies, discus and catfish at 9:00, then a presentation by Dr. Goldstein on cichlids at 10:15. In order to cover as much as possible, we three each went to a different workshop with a tape recorder. I'm looking forward myself to hearing those other sessions on tape. After lunch we met again for an excellent presentation on diseases, separated for workshops on anabantoids, foods and feeding and marine butterflies and angels. The banquet Saturday night, though over-subscribed, proved most entertaining. Dr. Gene Lucas, noted betta geneticist, was our after-dinner speaker. He spoke on his recent trip to South East Asia to see how these fish are collected in the wild.

These seminars were well planned and most informative, as well as enjoyable. The guest speakers were excellent. This was a fantastic, enlightening weekend, where experts shared with us their hard-earned expertise. It was well worthwhile attending...an invaluable learning experience. The hospitality extended by Mid-South members equalled only the good-fellowship engendered throughout the weekend by those attending. There were representatives from Alabama, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Tennessee and Virginia, maybe more. The workshops were indeed well attended.

Still hours to go before we hit the sack...another get-together in the hospitality room was followed by a midnight visit to the home of one of Memphis' best. Herschel Wade raises championship bettas, angels, and other fish. A tour of his betta room is an education in itself. We brought home lovely examples of his fish through Mr. Wade's generosity. Many thanks for real southern hospitality.

Sunday morning arrived much too soon after too little sleep for the weary. Breakfast featured an active discussion of the proposed formation of a Federation of Aquarium Societies throughout the Southeast to coordinate such things as show dates and breeder's points. (Mid-South has promised to keep us posted on further developments).

After which the "Auction of the Century" was held, proceeds going to help finance the workshop weekend. During the weekend there were also opportunities to swap fish with other hobbyists. Gene and I acquired a few cichlids not easily found in our area at this time, such as the Rusty cichlid, *M. vellicans*, *P. elegans*, *G. wavrini*; also Malawi and Tanganyke salts (the latter not yet generally available). The final luncheon banquet featured a slide show and program by Larry Arnold on Aquarium Photography.

After this we scurried back to our rooms to bag up our newly acquired fish for transport home, before checking out. The back seat of Tad's car was again loaded with styrofoam shipping cartons full of precious cargo. Again we took turns behind the wheel, trying to catch a few winks when rotated to the back seat, still ensuring at least the driver remained awake. We made about three final stops at fish shops on our way out of town...even bringing home tanks and medications not seen at home. You can't keep a dedicated fish nut down! (Didn't lose one fish in transit, either.)

After a weary sixteen hour return trip and a very

minimum of sleep, we arrived home sometime Monday. Gene and I managed to stay awake about long enough to attend our own monthly meeting of the PVAS. (Hope someone put Tad to bed.) Glad we had two weeks to rest up for the AANCA meeting.

It was a full, busy, informative, exhilarating experience, attending the workshop. I thoroughly enjoyed the weekend. It was a very special happening. We learned a lot and met many wonderful people in the hobby; but let me say this: none were finer than the two gentlemen I accompanied. Thank you for a truly wonderful initiation to the intra-society level of the hobby. We can learn so much from one another and all these people know how to share.

I enthusiastically recommend you avail yourself of any such opportunity which comes your way. WHO IS GOING TO THE NEXT ONE?



KEEPING
TUBIFEX
ALIVE

German text by H. Fischer
DATZ November 1972

Translation by H. Lenzen

Many hobbyists have often wondered why their tubifex could not be kept alive more than eight to ten days, if that long. Most of us suspected that the lack of oxygen was responsible. Keeping them in a refrigerator would buy a few extra days, but the end was always inevitable. Finally I realized what was happening to my daily washed tubifex: they were starving to death!

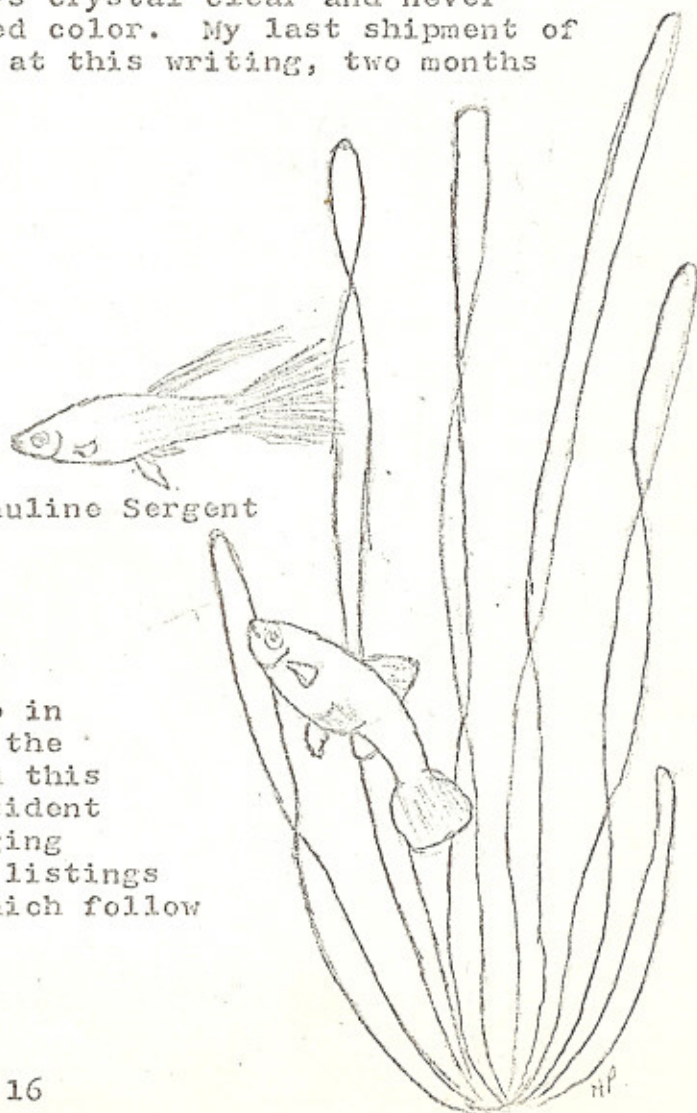
After much experimenting with suitable diets, I asked my supplier to send me some of the water and muck from the area where he collected tubifex. He included a jar full of black, sticky, foul-smelling muck with some tubifex mixed in with the next shipment. I added the stuff to my clean supply of tubifex and let some water run over it for a while. This time I was able to keep my tubifex much longer-- it seemed I was on the right track. I analyzed the contents of my tubifex jar and found, next to the tubifex, dead leaves, bark and wood fibers. From my next outing to the country I brought back a supply of dead leaves and a piece of slightly rotted oak bark. I placed the whole 'mess' on the bottom of a bucket, placed my shipment of tubifex inside and added a little water. The results were encouraging: after five weeks not one worm died!

Today my tubifex container is a plexiglass jar with a few pieces of oak bark; the tubifex are attached to the pieces of bark in large clumps and consume almost the entire bark. The water stays crystal clear and never assumes the old tell-tale red color. My last shipment of a half quart of tubifex is, at this writing, two months old.

THE
GUPPY
CORNER

With Pauline Sergent

So our members can keep in touch with the goings-on in the guppy world, I have included this month part five of IFGA President Stan Shubel's series on judging guppies, plus the IFGA show listings and point system, both of which follow Stan's article.

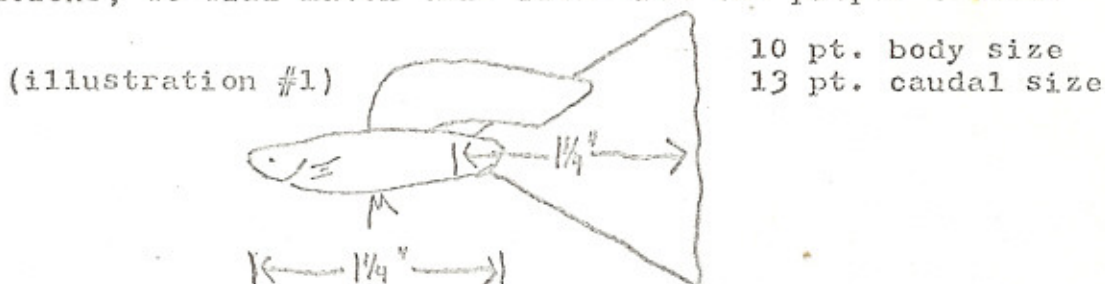


JUDGING GUPPIES - PART V
 JUDGING CAUDAL SIZE

By Stan Shubel
 President, IFGA

In previous segments we have covered the body, dorsal and caudal shape. Size of the caudal was left for last, for here the 1 to 1 ratio factor comes into play. This may be somewhat difficult to understand for the beginning judge, but once understood, it makes judging guppies much simpler and more accurate.

Going back to the body, we said that a male fish with a $1\frac{1}{2}$ " body would receive close to the maximum of 10 points for size at the present time. So, through the use of illustrations, we will match this fish with the proper caudal.



A further breakdown of size points in proportionate ratio would be as follows: starting first with the body to which the caudal must conform in size:

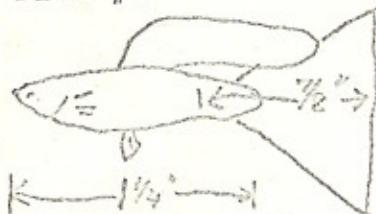
approx.	Body Size	Matching Caudal Size
	1-1/4" .. 10 points	13 points
	1-1/8" ... 9 points	12 points
	1" 8 points	11 points
	7/8" 7 points	10 points
	3/4" 6 points	9 points
	5/8" 5 points	8 points
	1/2" 4 points	7 points

Generally speaking, at a show you will seldom go below a four-point male guppy...if you do, use the same proportional ratio on down.

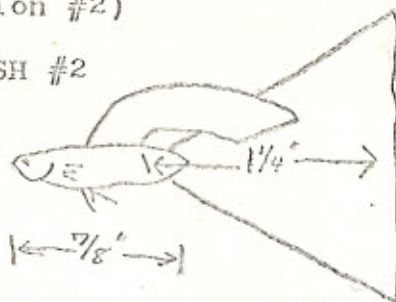
The next illustrations will show some out of proportion ratios.

(illustration #2)

FISH #1



FISH #2



On fish #1 we have a $1\frac{1}{2}''$ body which would receive, for descriptive purpose, 10 points for size. The caudal is $\frac{7}{8}''$, which is smaller than is required since it would match a 7-point body, giving it a 10 size point factor (see chart). Deduct one point because the total area of the caudal is less than required. The fish would then receive a total of 10 points for body size and 9 points for caudal size....for a total of 19 points for these two factors.

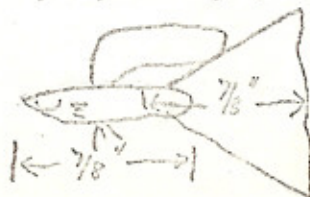
On fish #2 we have a $\frac{7}{8}''$ body which would receive 7 points for size. The caudal is large enough for a $1\frac{1}{2}''$ body so is out of proportionate ratio. A 7-point body calls for a 10-point caudal size (see chart). Whereas both fish are out of the 1 to 1 ratio, the larger caudal is slightly more desirable than the small one on fish #1, so you would allocate one more point for caudal size (making caudal size 11 points and a total of 18 points for these two factors.)

As you will note, fish #1 received a total of 19 points for body and caudal size; fish #2 received 18 points. All other factors (color, dorsal, etc.) being equal, you would go next to symmetry, which may be defined as follows: the over-all pleasing proportions and balance of a fish in the proper ratio.

Fish #1 would receive 1 point for symmetry and fish #2 would receive 2 points. Hence the two fish would tie with totals of 20...which would indicate that the too large body on #1 and the too large caudal on #2 are not desirable characteristics.

The next illustration shows a fish with a $\frac{7}{8}''$ body and a $\frac{7}{8}''$ tail. The following will describe how it would win over the other two fish by symmetry points...with all other factors being equal.

(illustration #3)



First of all the $7/8$ " body would receive 7 points. The $7/8$ " caudal would receive 10 points for a total of 17 points, which is 2 less points for size than fish #1 and one less than fish #2. But, by going to symmetry points this fish, being in correct ratio (again everything else being equal) you would give this fish 4 points for symmetry, thereby causing it to win over the other two fish with a total of 21 points, even though one fish has a larger body and the other a larger caudal.

As in all judging try to retain at least one point for improvement, although the occasion does arise where you will need to use it for breaking a tie.

In summary, this is not an in-depth study on judging, but merely an outline and guide. Where we allow only 10 points for an approximate $1\frac{1}{2}$ " body, we give 13 points for a $1\frac{1}{4}$ " caudal. If one were to take into consideration only the total points involved, it would seem out of proportion. But when you consider the total area (length and width) I'm sure you'll agree the caudal is much larger than the body, hence the extra points.

In the future we will cover the plus-point method of judging. It is a simple and very effective judging system, but...YOU MUST KNOW THE IFGA POINT STANDARDS TO USE IT.

Just in case you are still wondering about the tie between fish #1 and fish #2, it is up to the judges' discretion to break a tie if the total point factors are the same. In this case I would place fish #2 ahead of fish #1.



IFGA SANCTIONED POINT SHOWS FOR 1973

Guppy Associates of Chicago	March 31-April 1 (IFGA Meeting)
Guppy Associates of Toronto	May 4-5
Guppy Associates of Cleveland	May 13-14
Alabama Aquarium Society	May 26-27
San Fernando Valley Guppy Club	June 9-10
Indianapolis Guppy Breeders	June 23-24
Everglades Guppy Association	July 21-22
Guppy Associates of Hawaii	?
Gateway Guppy Assoc. of St. Louis	August 4-5
Orange County Guppy Club	September 1-2
No. East. Indiana Fancy Guppy Assoc.	?
Columbus Ohio Guppy Specialists	Nov. 3-4 (Annual Meeting)

IFGA POINT SYSTEM

	MALE			FEMALE		
	Body	Dorsal	Caudal	Body	Dorsal	Caudal
SIZE	10	10	13	13	7	13
SHAPE	4	4	10	9	4	10
COLOR	8	8	12	5	6	12
CONDITION	<u>3</u>	<u>3</u>	<u>5</u>	<u>3</u>	<u>3</u>	<u>5</u>
	25	25	40	30	20	40
DEPARTMENT	5					
SYMMETRY	5					

Tanks: 10 points per fish for similarity

Maximum of 10 points may be deducted for body deformity for all entries.

WHAT'S HAPPENING AT THE NATIONAL AQUARIUM

By Alan Levitt

The former Prime Minister of Japan, Nobuske Kishi, has donated eight rare and very beautiful Koi Carp to President Nixon and the people of the United States. The eight fish, one to three feet long, are valued at \$60,000. A new 850 gallon Koi Garden is being constructed in the center of the aquarium to house the fish. It will be landscaped with rocks and plants and will also include a small waterfall. The Koi are tentatively scheduled to be presented here on April 9 as part of an official Cherry Blossom Festival event. The Cherry Blossom Princesses, officials from the Japanese Embassy, the Interior Department and possibly the White House will participate in the ceremony. Koi are relatives of the common carp but have been bred for centuries to bring out special color and scale patterns in much the same manner as guppies and fancy goldfish. In many cultures of the far east, Koi symbolize courage and strength.

Last month, we received six baby Leopard Sharks in poor condition. All died the day we received them. They had been collected for the Aquarium and the University of Maryland off the California coast. Other animals acquired last month and placed on display include additional reef specimens from the Pacific and Atlantic, assorted invertebrates, two small radiata lionfish, and an Atlantic scorpionfish.

The ornamental fish section which included livebearers, angels, guppies, etc. was torn down to make room for a new native fishes display.

Spawnings included managuense, oscars, rift lake cichlids and fish in the parental care display.

The baby loggerhead turtles that were given to the aquarium last summer as part of a conservation project, have rapidly grown and most are over one pound now. Their diet consists of smelt, goldfish, lettuce, shrimp and clams. They are expected to weigh between six and eight pounds when they will be released off the Georgia Coast next summer.

Also last month, Acting Aquarium Director David Allen was officially made Aquarium Director.

TRADING POST

If you are looking for particular fish or any equipment or have any to sell or trade, list them below. Tear out this sheet and give it to Don or Linda DeRoze so they can put it in the next issue of the Delta Tale.

NAME: _____

PHONE NUMBER: _____

I HAVE TO SELL (PLEASE PRINT): _____

I WANT: _____

TRADES: _____

MISC: _____

Date _____ 1973

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 interests
you? (guppy, cichlid, other) _____

How long do you plan to be in this area? _____

Occupation _____

Membership dues for the P.V.A.S. are \$7.50 family; \$5.00 individual; \$3.00 corresponding and \$2.50 junior. Completed applications accompanied by your check or money order should be mailed to P.V.A.S., P.O. Box 6067, Arlington, Virginia, 22206. Please attend our meetings at the Coca-Cola Bottling Plant, 5401 Seminary Road, Alexandria, Virginia at 8:00 P.M.

1973 Meeting Dates

January 8
February 12
March 12

April 9
May 14
June 11

July 9
August 13
September 10

October 8
November 5
December 10

Potomac Valley Aquarium Society
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Shirlington Station
Arlington, Virginia 22206



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