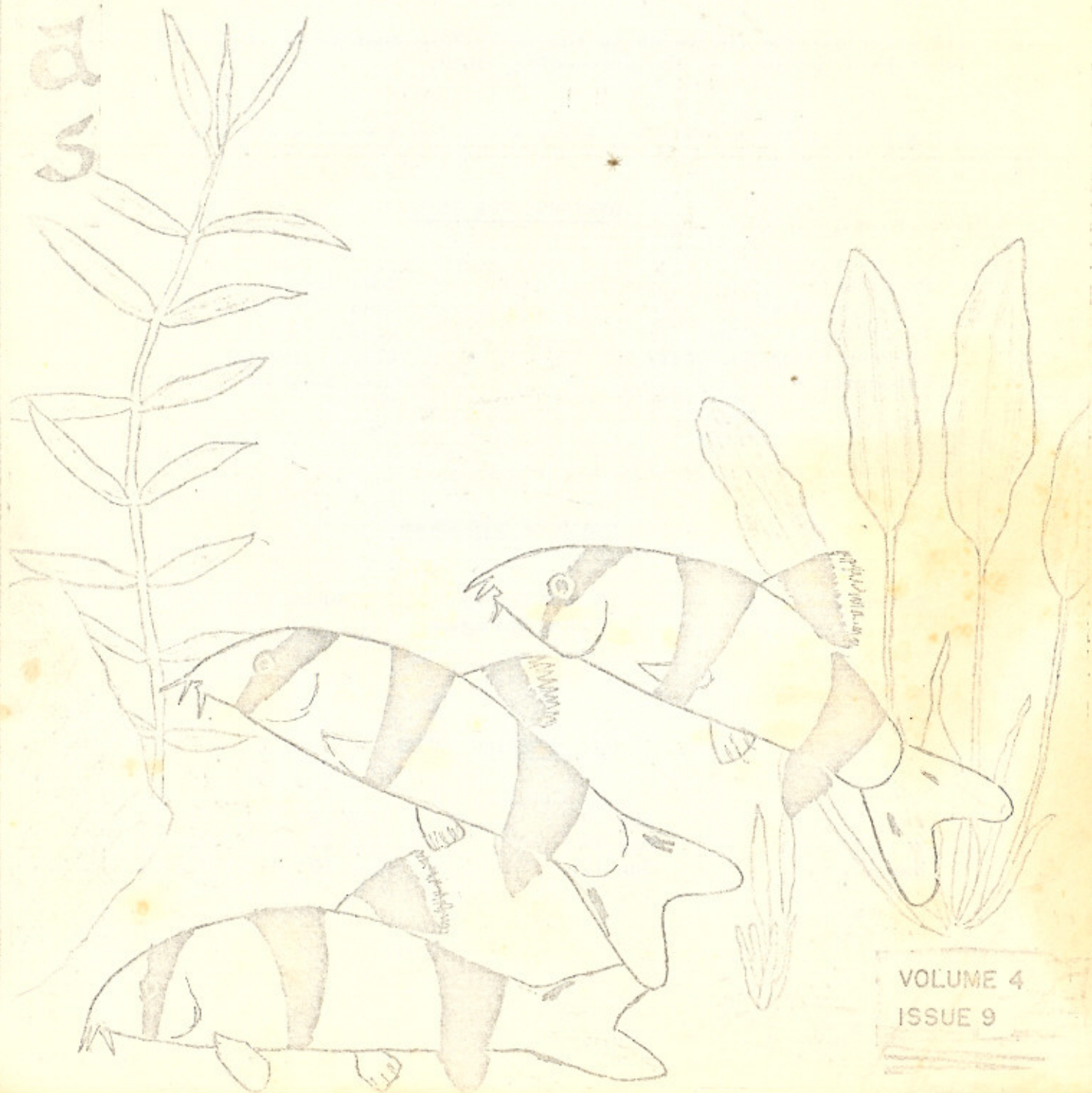


DELTA TALE

OFFICIAL PUBLICATION OF P.V.A.S.

SEPT. 1973

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VOLUME 4
ISSUE 9

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.

All materials for inclusion in the DELTA TALE must reach the editor no later than the 10th of the preceeding month.

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1973 MEETING DATES

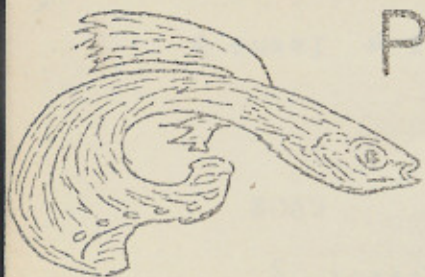
Jan 8	Apr 9	Jul 9	Oct 8
Feb 12	May 14	Aug 13	Nov 5
Mar 12	Jun 11	Sep 10	Dec 10

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COVER

This month's cover shows a trio of clown loaches, Botia macracantha, drawn by Henry Pettingill.



POTOMAC VALLEY AQUARIUM SOCIETY

From the President

Since Dr. Jessup is in Europe "working," we will take advantage of his space to relay the announcement we received from the Smithsonian Institution in Washington concerning their salt water fish and invertebrates expedition Sept. 15-16.

Associates, young and old, are invited to participate in an unusual two-day marine study trip to Wallops Island, Virginia, on the eastern shore of the Chesapeake Bay. Under the guidance of David Allen, Director, National Aquarium, and Alan Levitt, Director of Education, National Aquarium, participants study and collect a wide variety of saltwater fish and invertebrates, using such methods as seining and trawling in boats, beach-combing, digging and crabbing.

The group is housed and will also work out of the Marine Science Center, operated by Marine Science Consortium, Inc., which serves many universities in the study of marine biology.

The area is known for its protected bays and inlets, making it an excellent area for specimen collecting. Larger fish such as sharks and stinarees will also be observed.

Participants are lodged in dormitories, and supply their own blankets, sheets, pillows, and pillowcases, or sleeping bags. Lodging, meals, soft drinks, beer, and all necessary equipment for collecting are supplied.

Participants provide transportation, and if able to share their car for the four-hour drive, are asked to specify this on application. A map and itinerary sent with confirmation.

(Code: 5003-03) - 12 noon Sat., Sept. 15 to 2:00pm Sun., Sept. 16. (Lunch will be provided both days.) Members*-\$35.00; Members' children ages 11-14 only-\$30.00; Non-members-\$42.50; Nonmembers' children ages 11-14 only-\$37.50.

*i.e. Associates of the Smithsonian Institution

EDITORS' NOTE

Well, you all really came through in a big way this month--three articles from our own members. Gene Sergent relates how his and Pauline's "rejects" produced a prize-winning purple strain of show guppies; Joel Goodman tells of his various experiences with the new gold auratus; and Sue O'Meara, in her new monthly column, discusses new things of interest to all of us in the hobby. Contact her if you have any information which would benefit others in the club so she can include it in her column. Sue explains her unusual by-line: "'Soupy' is from my name; I was called 'Sue P.' at camp and the kids all called me 'Soupy' because I worked in the kitchen as an aide." If you don't know what "bouillabaisse" means, consult your cook books or dictionaries.

Happy reading!

--the Editors

ANNOUNCEMENTS

The September meeting of the Guppy Club and the Cichlid Club will be at the following locations:

Guppy Club
Sept. 7 at 8:00pm
Coca Cola Plant
5401 Seminary Road
Alexandria, Va.

Cichlid Club
Sept. 19 at 8:00pm
John Jessup's
1065 N. Manchester St.
Arlington, Va.
534-1704

SECRETARY'S LETTER

The August 13 meeting was presided over by Gene Sergent acting for Dr. Jessup who was out of town. Of importance to all of us was the announcement that effective 1 August any member with an updated PVAS membership card plus other ID may on Mondays through Thursdays get from Aquarium Supply (2429 N. Harrison St.) any item on the special club price list. Any items not on the list must be negotiated through Dr. Jessup. There will be a new price list soon in the Delta Tale.

On October 13, PVAS will be sponsoring a judging seminar and auction for the benefit of all club members as well as guests. Since most of us need help in identifying quality fish and judging the relative merits of one fish above others in a specific class, coupled with the fact that we have the use of the Coca Cola plant for only one day (at least two are needed for a show), the Board voted to initiate plans for such a seminar. These plans were also mentioned previously before the General Meeting. Following the seminar, which will run approximately from 9:00AM to 3:00PM, will be a fish auction. Anyone may bring fish to be auctioned with 25% of the profit going to the Society. The people who will be conducting the different segments of the seminar are well known for their knowledge in their particular area of special interest. The registration fee will be \$3.00 for adults (19 or over), \$1.00 for children (under 19); this is cheaper than if you had paid the \$1.00 for each entry in a fish show, PLUS the knowledge you will gain will be of benefit to both you and our club in our search for better fish. Members and nonmembers are urged to take advantage of this unique opportunity to meet with the experts and to participate in the auction.

As a follow-up to the July show on killifish, Bill Voss discussed briefly the ease of shipping killies and their eggs, bringing some of the styrofoam boxes he's received, as well as the small containers of peat moss for shipping eggs. He also suggested membership in the American Killifish Association which gives access to the AKA trading post, an excellent way of obtaining better specimens.

Bill's report was followed by a brief question-answer period and then the bowl show judging. We had 56 entries this month--pretty good considering it was at a time when most are on vacation.

See you on September 10.

Linda DeRoze
Recording Secretary

PLEASE NOTE
DATE CORRECTION

JUDGING SEMINAR

AUCTION

WHEN Saturday, ¹³~~15~~ October 1973 9:00AM-6:00PM

WHERE Potomac Valley Aquarium Society
Coca-Cola Bottling Plant
5401 Seminary Road
Alexandria, Virginia

SCHEDULE

8:30 Registration begins

9:00 - 9:45 American Cichlids

10:00 - 10:45 African Cichlids

11:00 - 12:00 Delta Tail Guppies

12:15 - 12:45 Other Guppies

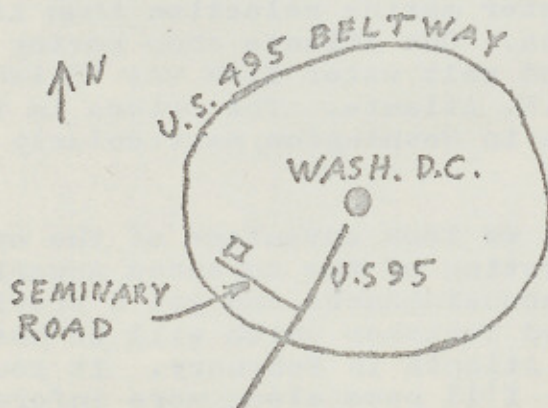
1:00 - 1:45 Misc. Fish

2:00 - 2:45 General Discussion with Seminar
Leaders and Fish Registering for
Auction

3:00 - 6:00 Auction

COST \$3.00/adult \$1.00/under 19 (pay at the door)
Price includes seminar handout materials
and snacks/refreshments. No fee for auction
only.

MAP



Take Seminary Rd. West off US 95 south
of Wash., but within the Beltway (US 495)
around Wash. The plant is on the right
about a mile from US 95.

MEMBERSHIP AND THINGS

We have had a real surge of interest in the PVAS from potential members thanks to an article written for the Washington Post/ Potomac Magazine (July 29th edition) by Alan Levitt. The article entitled "Fish Collecting" deals mainly with marine fishes and included a guide detailing the best spots to catch your own locally. In his article Mr. Levitt listed the addresses of the four aquarium societies in the Washington area and suggested that his readers write for a copy of their monthly magazine and an application blank.

Mr. Levitt had a second article in the same issue spotlighting Pauline Sargent and her guppy collection. He describes the Sargent's fish room and tells of some of their experiences with guppies. The article gives people a glimpse of the time, effort and expense involved in breeding and maintaining show guppies.

If you missed these two features try and obtain a copy; they make interesting reading.

While in Atlanta, Georgia this month, I managed to visit a few of the fish shops in the area. Saltwater aquariums are very popular there and the shops in the area cater heavily to the marine hobbyist. In addition to being more abundant, the shops had a much greater marine selection than is available in the Washington area. One Atlanta shop having a good selection of both fresh and salt water fish was "Silent World" at 638 Linberg Way in N.E. Atlanta. The prices in the area were generally higher than in Washington, particularly on supplies and equipment.

While in Atlanta we took advantage of the opportunity to attend the monthly meeting of the Advanced Aquarist of Atlanta. We made several new acquaintances and got a preview of plans for the Winter Weekend Workshop which will be hosted by the Advanced Aquarist of Atlanta in February. It sounds like an interesting weekend. I'll pass along more information after the plans and speakers list are finalized.

Chuck Story

POTOMAC VALLEY AQUARIUM SOCIETY
TABLE SHOW RESULTS AND STANDINGS
AUGUST 1973

<u>FANCY GUPPY</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
a. Red	Hirschman, E.	Hirschman, E.	Poulsen
b. 5 matched males	Sergent	Poulsen	Hirschman, E.
c. AOC	Sergent	Sergent	Sergent
<u>CICHLID</u>			
a. C & S.A. Dwarf	Aldridge	Hardy, C.	Aldridge
b. Tilapia	Hardy, C.	Sprague	Sprague
c. Other	Hardy, C.	Hay	Hardy, C.
<u>EGGLAYER/LIVEBEARER</u>			
a. Livebearers	Smith, R.	Smith, R.	Voss, L.
b. Killifish	Hay	Voss, E.	Hirschman, A.
c. Other	Tuttle	Tuttle	Tuttle

* * * September 10, 1973 * * *

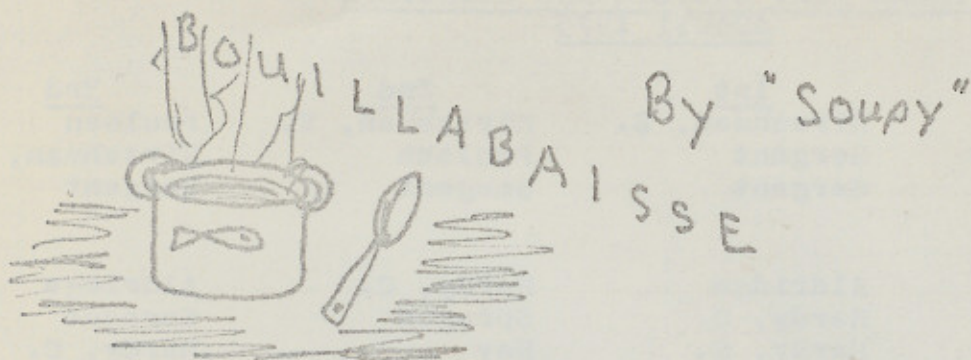
Guppy	Blue, Black, AOC
Cichlid	Angelfish, C & S.A. Breeding Pairs, Other
Egglayer/Livebearer	Sharks & Loaches, Catfish (Non-Corydoras), Other

POINT COUNT

<u>GUPPY</u> (16)	<u>AUG.</u>	<u>QTR</u>	<u>ANN'L</u>	<u>EGGLAYER/ LIVEBEARER</u> (29)	<u>AUG.</u>	<u>QTR</u>	<u>ANN'L</u>
Sergent, P & G	14	23	61	Hirschman, A.	6	19	39
Poulsen, W.	8	19	57	Smith, R.	10	14	39
Hirschman, E.	11	16	35	Voss, L & W	11	11	11
Wolcott	0	10	48	Tuttle	9	9	9
Melnick	0	8	41	Pettingill	7	7	17
Cunningham	0	5	14	Hay	6	6	6
Bennett	1	1	1	Story	5	5	5
Walsh	0	0	33	Shiflette, A.	4	4	17
Shiflette, N.	0	0	12	Hardy, B.	4	4	13
Wilson	0	0	4	Hardy, D.	3	3	7
				Kerwin	1	1	1
<u>CICHLID</u> (11)	<u>AUG.</u>	<u>QTR</u>	<u>ANN'L</u>	DeRoze	0	0	16
Hardy, C.	14	23	74	Shiflette, D.	0	0	14
Jessup, John	0	14	89	Jessup, June	0	0	8
Sprague	5	9	22	Goodman	0	0	4
Aldridge	7	7	16	Dua	0	0	2
Story	0	3	6	Kelly	0	0	2
Hay	3	3	3	Sprague	0	0	2
Shiflette, A.	0	3	3				
DeRoze	0	0	22				
Hirschman, E.	0	0	19				
O'Neara	0	0	17				
Shiflette, J.	0	0	11				
Goodman	0	0	7				

COME ON AND SHOW YOUR FISH!!!

KEEP THE COMPETITION GOING



This is the first article of a new monthly column about new things or happenings of interest to others in the hobby. All opinions are mine alone. I will talk about what other clubs are doing interesting, new products or literature on the market, especially nice or hard to find species of fish available in our area, and pass on other pertinent information concerning people or developments in our hobby, and in our club.

I welcome questions, comments (no diatribes, please!), further information for inclusion and news of our members' accomplishments in any area of the hobby. Let me know what you want me to talk about or what you are looking for. Call me at 522-5282 (except Thursdays) or see me at the meetings.

News of other clubs:

The Greater York Aquarium Society (York, Pa.) held their first annual show the weekend of June 29th with 104 entries in 12 classes. Two PVAS and AANCA members went up to judge. GYAS did a great job--excellent show staged in a shopping mall with multiple entries in set tanks--another way to do it. Congratulations to those who worked so hard to make the show a SUCCESS! We may be seeing some GYAS members in our area soon. I'm trying to arrange an exchange visit to Virginia. And I want to encourage our members to attend other clubs' shows (let us know beforehand so we can go, too) whenever possible. You can learn much and meet many great people in the hobby this way. So go broaden your horizons.

New products or literature:

At the So. Jersey show in May '73 we saw plastic terrariums with slide-on covers used for showing fish--very handy. I immediately ordered some from our club supplier for myself. After a lengthy search of wholesalers, one has been persuaded to supply them to the shop for us. They are lighter than glass bowls or small tanks and less bulky--expect to see them in use at our monthly bowl shows, too.

Have you tried Pride of Suffolk foods yet? I've tried most of their foods with excellent results. These make an excellent change in diet--up to 69% protein. Most fish like a variety. Have just acquired "PHASE 1", "Prawn powder," and

SURF-FOOD (ground), all suitable for feeding fry. TRY IT,
YOU'LL LIKE IT!

Mesco is another line worth mentioning. Their products include Malaqi and Tanganyika salts and Brood Tonic, to mention just a few. My second spawn of *L. savoryi elongatus*, in a smaller tank than the first spawn, are growing faster, the only discernible difference being the addition of Tanganyika salts to their water. Certainly worth a try if you are trying to breed fish from that lake.

There are quite a few publications dealing with CICHLIDS exclusively. For you cichlid nuts interested, the ones I have heard of are:

ICHTHYS MAGAZINE, Beach Cities Cichlid Assoc.

BUNTEARSCHE BULLETIN, American Cichlid Assoc.

CICHLIDOPHILE, Journal of the Rocky Mtn Cichlid Assoc.

CICHLID POWER, Southern Calif. Cichlid Assoc.

Advanced Cichlid Aquarists of So. Calif. Newsletter

(Thanks to Editor J. Greenwald, ICHTHYS MAG., for this info.)
Guppy enthusiasts--inform me likewise.

Interesting species seen:

Just to mention some fishes which caught my eye:

Telmatochromis temporalis (from Lake Tanganyika), lyretail and albino swordtails at Aquarium Supply.

Synodontis cats (maybe Syn. nigromaculatus, from Lake Malawi) at Wally's Aquarium.

Haplochromis compressiceps (the Malawian eye-biter), J. marlieri, cobalt blue Ps. zebras, and an unidentified new Malawi called "checkerboard auratus" at Pisces and Aquarius revisited.

Anyone seeing "really neat" specimens anywhere around, please do volunteer the info., too. I don't want to overlook anything.

Info. or people in the hobby:

Here's some identification info. worth passing along (as reported by L. J. T., ICHTHYS MAG., May '73): A new development concerning the genus Tilapia and its derivatives was mentioned at the Adv. Cichlid Aquarists of So. Calif., April '73 meeting by program speaker P. V. Loiselle, which will have far reaching results in the hobby--"The former genus Tilapia has been split into two genera, Tilapia (containing the substrate spawning members of the old genus), and Sarotherodon (containing the mouthbrooding members of the old genus, i.e. Tilapia melanotheron* is now Sarotherodon melanotheron). For those interested, the reference is:

Trewavas, E., Green, J., and Corbet, S.A. 1972

Ecological studies on crater lakes in West Cameroon
Fishes of Barombi Mbo, J. Zool., London, 167:41-95.

*black chin, formerly also called Tilapia macrocephala.

Info. or people in the club:

Plans for the Judging Seminar to be held on Oct. 13th are well under way. This could be an important event for P.V.A.S. Well-known experts in this field are being asked to conduct the seminars. In my opinion, the seminar can stimulate interest, educate and encourage participation in the hobby. This may well be a social event worth attending in aquarium society circles on the east coast. Please volunteer to help carry out this undertaking--support your club's activities--work within the club for the advancement of all.

Other P.V.A.S. activities include regular meetings of the cichlid and guppy clubs. Any interested club member may attend. The cichlid club is currently working towards compiling a standard spawning report form for use in its research project. All pertinent data will be recorded and later codified to show parameters within which successful spawns can occur for various species. All interested members are enjoined to participate.

A comment from me regarding our arrangement with our club supplier--since August 1st we can buy direct from the price list which can be a great help to us. Looks like a good deal as long as members don't abuse the privilege--purchases for club members only, not for friends. Please don't flaunt or abuse this privilege; in these days of ever-rising prices, any savings in cost is valuable to us. Be reasonable--don't spoil it for the rest of us.

Next to last note--people:

I read a most entertaining article in The Washington Post--Potomac, July 29, 1973 entitled: "Pauline Sergent--Full Tanks Ahead." Pauline and Gene Sergent are serious guppy raisers and have been active members (and officers, too) of our club. Congratulations, Pauline, on such fine recognition of your hobby--hope to see you in attendance at our meetings again.

Until next month, then, let me close saying: (one last word--I promise I won't interrupt again!!!) I make new discoveries in the hobby all the time; there's always something exciting. WHAT A WAY OF LIFE! Don't neglect to inform me of new developments in the hobby you come across. Let us share the wealth with others.

A HAPPENING
IN
GUPPY BREEDING

By Gene Sergent



Many are the experiences encountered in breeding and raising guppies. In the relatively short time we have been in the business, there have been many experiences, both pleasant and bad. I might add that in terms of statistics, the bad experiences outnumber those that are pleasurable by a considerable edge. The incident I am about to describe was brought about by bad experiences with two separate strains of fish that resulted in what could turn out to be an excellent strain of show guppies.

In 1970 Pauline purchased two different strains of purple deltas; one at a show in New Jersey and one from a breeder in California. Both strains produced nothing but "junk". After four or five generations, it was more than evident that we could no longer afford to use up tank space for these fish. With nothing to lose, males from one of the strains were crossed with females from the other without any thought that the result would produce showable fish. Surprise! The first babies developed into show quality guppies that were different from any seen in this area--or at least in the local club. The cross produces delta males with short stocky bodies, excellent finnage of varying colors: purple, grey pattern, and green. The color of the dorsal and caudal matches, almost without exception. Most of the fish have half black bodies which are gold from the pectoral fins forward. Not all was rosey, however. The first two generations of males exhibited unusual behavior when 5-6 months old--they stood upright (head up) in the water and became somewhat listless. The first inclination was to flush them and hope that the next generation would be OK. By accident we apparently discovered a remedy--not the cause--for their behavior. We had a tank that began to exhibit the abnormal behavior about the time we were to leave for a three week vacation. Before leaving, we put a heavy dosage of tetracycline in the water and told our son to avoid contaminating other tanks with utensils or water from that tank. During our absence, all our fish were fed very sparingly. Upon our return, we found that the funny acting fish were lively and

displayed no unusual behavior. Some of them were later judged "best of show" at our local show. We can't be sure whether the medication, light feeding or the combination did the trick. If it happens again we will run some controlled tests to determine the cure. We would still like to know the cause. Any ideas?

PS: We are now working to set the various color strains produced by the original cross.

"GOLD AURATUS"

By Joel Goodman

The "gold auratus" has been in the hobby for about eight months at this writing. Through some good fortune, one male and four females were procured shortly after they arrived in this country. No scientific appraisal of this species will be attempted here. The fish's appearance and its behavior will be described as well as the circumstances it was observed under.

The fish is aptly named in that it has the same general shape and disposition as the species *Pseudotropheus auratus*. As yet, the "gold auratus" has not been assigned to any genus. It has a similar head shape to *P. auratus*, however its body is slightly longer with about the same thickness. Dimension wise, a mature "gold auratus" might measure $4\frac{1}{2}$ " as opposed to a *P. auratus* 4". The dorsal has spines in front, starts behind the head and continues along the back until the body begins to narrow to the tail. When raised, the dorsal is approximately $\frac{1}{2}$ " high. It comes gradually out of the back to a height of $\frac{3}{8}$ " and at the back is somewhat rounded. The dorsal fin is broad, rounded and unnotched. The ventral fins and anal fin have the same shape as those of *P. auratus*, as do the caudal and dorsal fins.

In both male and female, a horizontal black bar runs

along the dorsal from front to back; however, in the male the bar is more intense and broader, and in some females not present at all. It is suspected that the last condition is a color phase. The female is gold in color, the dominant male is dark blue, almost black, with light blue horizontal stripes. The lower stripe goes from eye to tail and another blue stripe forms a very shallow vee between the eyes. The upper stripe runs from the front of the head to the tail, with an upper shallow vee over the lower band between the eyes. On the face about $\frac{1}{2}$ " separates the vees; on the body about $\frac{1}{8}$ " separates the stripes. The upper vee across the face is a continuation of the upper body line.

When frightened or not dominant the male lightens in color and can become gold. The female when frightened, develops pale gold stripes where the male has light blue ones. The rest of a frightened female becomes a dark gold. This is also the coloration of an immature male.

The only exception know to the above description is owned by Chuck and Genny Story. It appears to be a male, having definite egg spots, and a broad black band in his dorsal, as well as the aggressive demeanor of a male.

Behavior patterns of this species are similar to other mbunas which have been imported into this country. This species has been observed in four situations. 1) A trio of "gold auratus" and a trio of "round-nose auratus" were kept in a 20 gallon long (bottom area 2.5 sq. ft.) for three months. 2) Those three "gold auratus" plus another female were put in an eighty-five gallon community tank (8 sq. ft.). 3) Over a six month period, six fry, spawned in October and released in November, were observed in a 22.5 gallon aquarium (3 sq. ft. of bottom area). 4) The six almost mature fry and the four adults were combined in a 55 gallon aquarium (4 sq. ft. of bottom area).

With the round-nose and gold males about the same size, the round-nose male was dominant. In the close quarters of the 20 gallon long, no spawning behavior was noticed, and the fish were quite aggressive towards one another irrespective of sex, species, or size. These are adult specimens four inches in length. The water in this aquarium, and all the others, was pH of 7.3 to 7.4 and water temperature of 77° F to 79° F.

The 85 gallon community tank (see article, January, 1973 Delta Tale) contained some twenty-three fish including the four adult "gold auratus." Other fish in the tank were *Melanochromis melanopterus*, *Petrotilapia tridentiger*, and *Cynotilapia afra*. These are larger and more aggressive than the "gold auratus," hence the "gold auratus" was unable to defend a territory for spawning.

From a previous spawn, released in November, 1972, six

fry were placed in a 22.5 gallon aquarium. From the time they were released until they were about three months old (approximately 1 3/4" long), the fry shoaled together. At about this age, the larger fish, males as it turned out, became slightly aggressive, began digging in the sand, and establishing territories. At six months old they were 3" long and added to the 85 gallon tank.

Shortly after this, a 55 gallon aquarium was established, pH 7.3, temperature 78°F, and all ten "gold auratus" were placed in this tank. Up to this point, no spawning behavior had been observed. The male had not been observed displaying to any female, but had been acting extremely aggressive. The next day the pH was raised to about 7.5. About two days later, it was noticed that one female was not eating. She was watched closely and six days later moved to a separate 20 gallon long aquarium. She released about 17 fry for the first time 29 days after it was noticed that she had stopped eating.

When she saw the author, the female partially hid herself in the rocks. Previously, she had always hid with her head up. This time she had her head about 1/2" lower than her tail and her dorsal spread. Her mouth was open, and the fry swam into it. It took about one minute for all the fry to crowd in her mouth. With the fry safely tucked in her mouth, she assumed her normal posture with head up and dorsal folded. The next day, she refused to take the fry back. She remained in the tank for three additional days. At this point, she was removed to a recovery tank.

Unlike other mbunas that have been spawned under similar circumstances, the "gold auratus" male was aggressive towards a brooding female. With *Pseudotropheus auratus* and *elongatus*, the male ignored the brooding female. In view of this experience, the brooding female should be removed as soon as possible. The first spawning, and this one were unobserved. Unfortunately the female did not survive in the first spawning, perishing five days after she released fry. However, the six fry did survive, and are now eight months old, and 3" to 3 1/2" long.

THE NATIVES ARE FRIENDLY

By Dave Ernst

O'Quarist, July, 1973

Okla. Aquarium Society

One year ago I was introduced to a fish that rivaled the coloration of the most exotic inhabitant of a saltwater reef. Its body was a bright red color somewhat more subdued than a red swordtail. The face and body were covered with electric blue lines and spots. The eye was ringed in bright orange while the black gill flap was bordered in white. Was this a new "lake fish" from darkest Africa or the latest South American "Biggy?"

No, and we didn't meet in a pet shop on opposite sides of a piece of glass. Our introduction took place at Spring Creek in Eastern Oklahoma on an OCAS outing. We were on opposite ends of the same fishing pole. I had just caught a superb 5 inch specimen of the long-eared Sunfish, *Lepomis megalotis*. Here was a fish worthy of any aquarist's tanks and since I had already successfully kept some native minnows, I decided to give my newfound friend a new home.

The water in Spring Creek had tested neutral with a 2.5 degree of hardness and a temperature of 70°F. At home I set up a 20 long aquarium with many plastic plants arranged to form a dense refuge. In addition a piece of slate was leaned against one side to form a cave. The tank was placed in the draft of the air conditioner near the floor. This kept the water temperature near 70 even during the hot summer months. Two one inch convict cichlids were added as dither fishes and to serve as scavengers. I had discovered earlier that the presence of some boisterous eager eaters does wonders in overcoming a new fish's shyness, and this was no exception. In two days the Sunfish was eating brine shrimp and an occasional worm. He maintained his initial bright colors and got along very well with his South American Cousins.

On Labor Day of last year some OCAS members returned to Spring Creek. This time I obtained a 4 inch specimen. Its colors were not as bright as the original fish and its ear flap was not as large. Was this the female of the species.?

The new fish was carefully inspected for any external parasites and then introduced to the original fish. Chaos erupted. If that little sunfish had had wings, it would've flown from the tank. I quickly divided the tank with a piece of glass. A small piece was cut from one corner of the divider thus leaving a small doorway from one side of the tank to the other. The two sunfish could see each other, and the convicts could get from one side to the other to perform the

cleaning chores, while the little female(?) could visit the male at her convenience.

Acriflavine was added to the water to inhibit any infectious diseases caused during the earlier battle. "Copper cures", Malachite green and Methylene blue are extremely poisonous to Centrarchids and should never be used. Acriflavine combined with frequent water changes is a safe cure. On several occasions the smaller sunfish would slip through the small doorway to make a special call on her large neighbor. These visits were swift and unromantic. Even on cold winter nights, when the tank temperature fell to 60 degrees, the two fish maintained their separate lodgings.

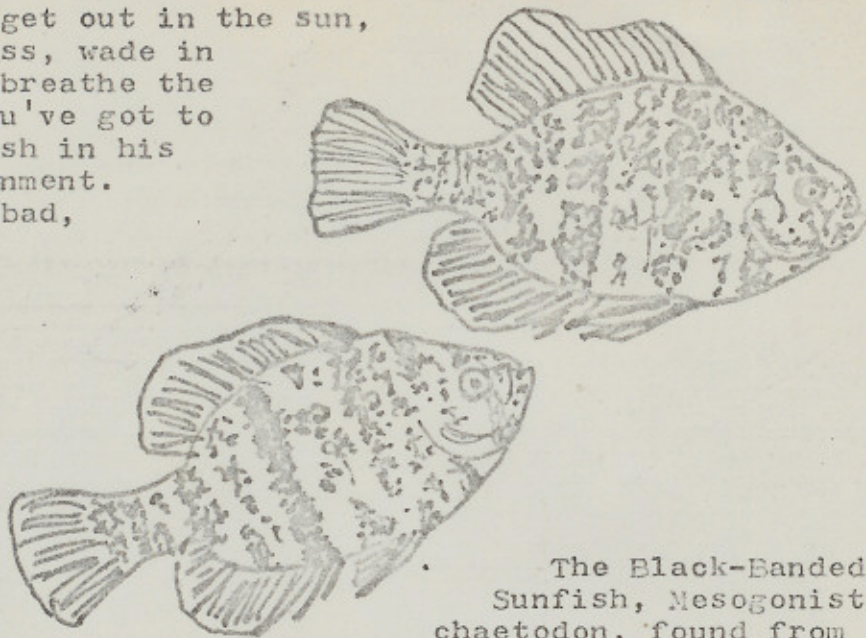
In spring, two things happened. The convicts spawned. It had taken them a year to reach maturity at the cold temperatures in this tank. Secondly, after removing the no longer docile convicts, the male sunfish began to fan a large depression in the gravel with his tail. On April 28th, I noticed the pair circling over the depression. The female was on the inside and the male was pressed close to her side as they circled side by side as if on a merry-go-round, over the pit the male had dug. Every now and then the male would dart off to one corner or the other while the female waited patiently over the pit until his return. My presence seemed to disturb the fish and after about a half hour the activity was broken off with the female quickly returning to the safety of her side. I could detect no eggs in the spawning pit.

After the three day Memorial Day holiday, I returned home to find that the male sunfish had rearranged the plastic plants on his side so as to block the view from the front of the aquarium. He was proudly guarding a new pit which seemed to be filled with four day old brine shrimp. On June 6th, nine days later, I noticed little silvery spots in the pit. Closer examination revealed that these spots were eyes. Without a peeping tom to disturb them, the fish had finished what I had earlier so rudely interrupted.

The fry are still in the pit although they do hop about now and then. They are shaped quite similarly to cichlid fry but their development appears to be much slower. The male constantly guards the fry pausing only for his daily brine shrimp or occasional earthworm. The female is relaxing in her quarters paying no attention to the new family next door. The water temperature is 70°F with a pH of 6.7, and a hardness of 5 DM. The tank receives Gro-lux light for 14 hours a day.

If rarity is determined by the cost and difficulty of obtaining a fish, America's *Lepomis megalotis* is a rare fish indeed. No amount of money will buy this beautiful friendly fish at your local pet store. Your wallet is of no use.

You've got to get out in the sun,
sit in the grass, wade in
the water and breathe the
fresh air. You've got to
outwit your fish in his
natural environment.
That's not so bad,
is it?



The Black-Banded
Sunfish, *Mesogonistius
chaetodon*, found from
southern New Jersey to
northern Florida.

These, plus twelve or so other varieties of sunfishes
may be found in our area waters. For further information on
local native species read How to Know the Freshwater Fishes,
by Samuel Eddy.

"B" COMPLEX VITAMINS...
HOW IMPORTANT ARE THEY TO FISH?

By Joseph L. Busso
Horseforth Aquarium Society

A 19th century medical professor, when asked by one of
his students, "what are vitamins?" answered, "Vitamins are
something which if we do not get enough of, we get sick."
Today, this is basically all we know about them. However,
through research, we have found that vitamins are a necessary
chemical in the synthesis of body enzymes. Knowledge of the

WHAT'S

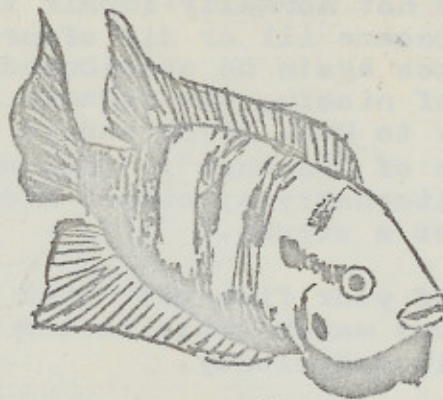
HAPPENING

AT

THE

NATIONAL

AQUARIUM



Firemouth
Cichlid

By Alan Levitt

This summer the National Aquarium hired its first woman aquarist, Susan Parry, a wildlife biology graduate of Lawrence College in Pennsylvania. Susan will be working on tanks and other projects through September.

On September 11, the Aquarium will also take on two more employees as part of a cooperative agreement with American University. In exchange for tuition, two aquarists (one will work in the laboratory and the other on displays and breeding projects) will assist Aquarium staff members through next Spring. This is a pilot program to train students in marine biology.

Last month, this writer, along with Aquarium Director David Allen and Aquarist Tom Opilla, went on a three-day collecting trip to Assateague, Chincoteague and Wallops Islands off the Virginia Coast. We stayed at the Wallops Island Marine Consortium while there and collected over 50 species of fish and invertebrates. Through the use of trawls, seines and other nets we managed to bring back enough species for a new 1,000 gallon display including seahorses, black sea bass, sea robins, filefish, pufferfish, porgy, toadfish, etc. We caught a three-foot sandbar shark, but it was released since we did not take large enough tanks to bring it back to the Aquarium.

The Pinecone Fish, written about in a previous column, died within a week of arrival. One never did eat and the other stopped eating after a few days.

A school of coral catfish were placed in the Venomous Fish Display last month, but were shortly removed after two lionfish mysteriously died (they were both in good health). Evidently, the lionfish got spined by the catfish and succumbed to the poison.

light disorganizes the basic process of cellular division and causes many mutations as exposure to radioactive isotope carbon 14. On the other hand, minor doses of U.V. to fish should not normally impair the health of mature adults. When fish become ill or die after mild exposure to U.V. their loss may once again be attributed to a vitamin B deficiency. A lack of niacin, the vitamin B, will increase a fish's sensitivity to U.V. light and in turn cause it to literally get a case of "sunburn". When a fish becomes "sunburned", it has two alternatives; either hide in the shade and starve, or eat and get a stroke.

If your fish get sick for no apparent reason and their symptoms match those in the following chart, they may have a vitamin deficiency.

<u>Symptoms</u>	<u>Due to lack of</u>
Growth reduction.....	Choline
Growth reduction and sluggishness.....	E12 Colalmin, Folic or Inositol
Growth reduction; eyes become opaque.....	E-2 Riboflavin
Nervous disorder and sluggishness.....	E-6 Pyridoyine
Nervous disorder, muscular disorders, convulsions, poor appetite.....	E-1 Thiamine
Skin diseases and sluggishness.....	Pantothenic acid
Skin diseases and convulsions.....	Biotine
"Sunburn" due to U.V.	Niacin

A dose of the necessary vitamin may be administered to fish by either of two methods; (1) dissolve the vitamin directly into the water, or (2) prepare a paste food (Gordon's formula or any beef heart paste) and add to it one half of the prescribed human dose of the specific vitamin needed. If this food mixture is fed two or three times a week, the deficiency should disappear and the fish will regain their normally healthy conditions. **CAUTION!** Do not feed your fish any human multiple vitamin. When a fish has too much of a vitamin it does not normally need it may develop what is known as "hypervitaminosis".

WHAT'S

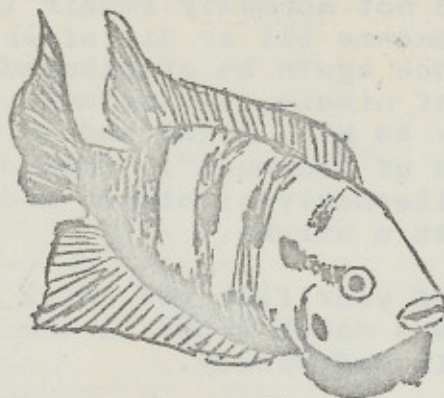
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Firemouth
Cichlid

By Alan Levitt

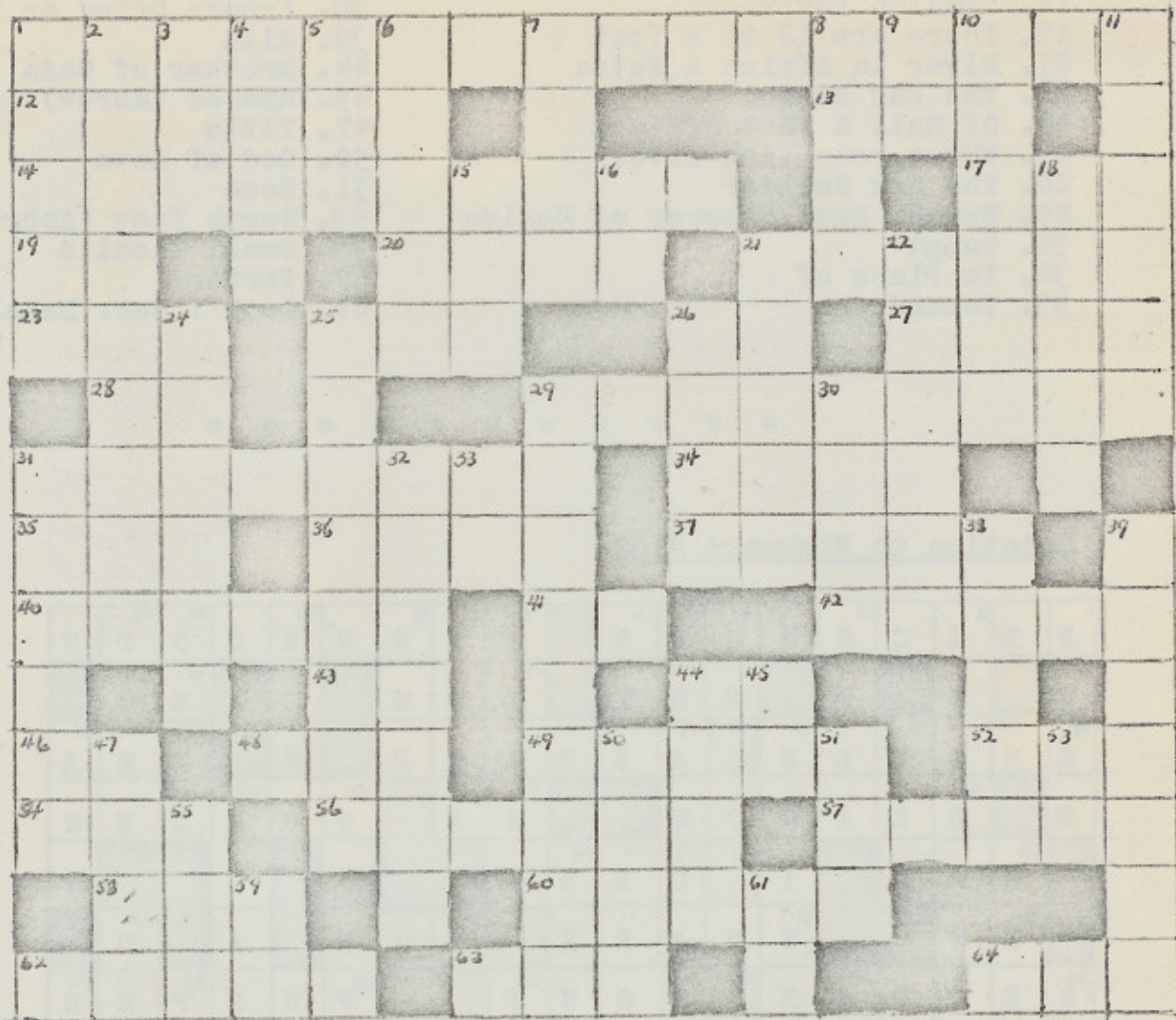
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Clues Across.

- 1. Corydoras Punctatus
- 12. Portion of Time
- 13. Lyric Poem
- 14. Endless Times
- 17. Loud Continuous Noise
- 19. On: In: Near: By:
- 20. Small Room In Prison
- 21. The Funny Loaches !!
- 23. Tear
- 25. Of Eat (Brit)
- 26. Negative
- 27. Contest of Speed
- 28. Commanding Officer (Init.)
- 29. After Dark Gourami !!!
- 31. Its Larvae Makes Good Fish Food
- 34. A Fever
- 35. Edible Grain
- 36. Soon
- 37. Bulls and Goats have them
- 40. Series of Steps
- 41. As
- 42. Compound Added to Gasoline
- 43. Impersonal Verb
- 44. Morning Hours
- 46. Prefix Meaning No

- 48. Owed
- 49. Stripped Danio
- 52. A Hotel
- 54. Automobile
- 56. Ripen
- 57. Titled
- 58. Insane
- 60. Sailfin Fish
- 62. Coloration of a Tetra
- 63. Part of Have
- 64. Title of Respect.

Clues Down.

- 1. Long Pointed Weapon
- 2. Also Called Black Tetra
- 3. Mineral in Basic State
- 4. To Weary
- 5. 2,000 Pounds
- 6. Decree
- 7. To Wind In Spiral Form
- 8. Childs Toy
- 9. Officer of the day (Init)
- 10. Red Platy with Black Fins
- 11. End of the Day Variatus !!!
- 15. Start in Golf.

- 16. Spanish for "The"
- 18. There are 12 to a foot
- 21. River in Africa & Tetra
- 22. The Far East
- 24. Of Mail & Post Offices
- 25. Where your fish live.
- 26. The Ark Builder
- 29. Sword: Last Emperor of Mexico
- 30. Tempt
- 32. In Place of
- 33. Toward

- 38. Freeze Dried or Brine
- 39. Slim
- 44. Brother of Cain
- 45. Mister (Abrev)
- 47. Title
- 50. God of Love
- 51. Some
- 53. North East (Abbrev)
- 55. Small Cichlid
- 59. Perform
- 61. Look : See: Behold!

* * * * *

Solution to Fishword #102

1	B	2	A	3	K	M	4	O	5	O	6	R	7	F	8	I	9	R	10	E	11	M	12	O	13	U	14	T	15	H				
	A		N		O		13	F	14	R	15	Y		16	L	17	O	18	U		O		19	S	20	O								
16	S	17	H	18	A	19	W	20	L	21	S		22	A	23	E	24	R	25	A	26	T	27	E		28	N	29	E	30	M	31	A	
	S		22	B	23	E	24	A	25	C	26	O	27	N		28	N	29	A		30	G	31	O	32	L	33	D	34	E	35	N		
		26	S	27	A	28	D		I		29	D	30	E	31	S	32	K		33	U		34	O										
		30	E					31	S	32	H	33	A	34	R	35	K		36	T	37	O	38	P		39	A	40	D					
34	B	35	E	36	T	37	T	38	A	39	S		40	S	41	O	42	U	43	P		44	P	45	U	46	F	47	F	48	E	49	R	
41	A	42	M	43	I		44	P	45	O	46	I		47	S	48	N	49	A	50	P		51	I		52	E	53	L	54	L	55	A	
	R		47	D	48	W	49	A	50	R	51	F	52	S		53	K	54	N	55	I	56	F	57	E		58	R	59	A	60	T	61	S
53	B	54	E		55	A	56	C	57	T		58	W	59	M		60	C	61	E	62	A	63	S	64	E		65	G	66	A	67	B	
			61	P	62	S	63	E	64	A		65	O	66	A	67	T	68	H		69	L		70	H	71	A		72	S	73	O		
67	A	68	I				I		69	R	70	E	71	H	72	A	73	U	74	L	75	S		76	D	77	A		78	R				
		73	C	74	I	75	C	76	H	77	L	78	I	79	D		80	E	81	X		82	S		83	B	84	O	85	T	86	I	87	A

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 | April 9 | July 9 | October 8 |
| February 12 | May 14 | August 13 | November 5 |
| March 12 | June 11 | September 10 | December 10 |

HIGH-PROTEIN, VITAMINIZED FOOD FOR BOTTOM FEEDERS



Cichlasoma meeki. The Firemouth Cichlid is one of the most popular aquarium fishes of the family Cichlidae. It is found throughout much of northern Central America and grows to approximately 14¾ cm. (6 inches) in length. Pairs or single specimens are recommended for the community tank.



In the world of fishes, when it comes to eating, the poor bottom feeder is apt to be a second-class citizen. He gets the leftovers which have floated down through swarms of other fishes. But not so with TetraMin Staple Tablet Food! Here's a basic diet in handy tablet form, crammed with all the nutritional goodness of TetraMin flakes — proteins and vitamins too. Slow-dissolving, the little tablets sink fast enough to bring a tasty meal to Catfish, Loaches, Cichlids, Barbs and other bottom feeders, right past the hungry mouths at higher levels. Feed TetraMin Staple Tablets to both tropicals and marines, and don't forget turtles — they love 'em too.



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THE RIGHT FOOD FOR EVERY FISH

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ΤέτραMin

What's in a name? In TetraMin, a great deal. Many people ask what it means. Contrary to popular belief, it doesn't mean the Tetra fish family, which is widely known among aquarists. The fact is, the name is compounded from two words. "Tetra" is the Greek word for four. It stands for TetraMin's original recipe of four types of flakes. "Min" comes from vitamin, which in Latin means "a substance necessary for life." So you have TetraMin. In any language it stands for good fish nutrition — the key to being a successful fish hobbyist.



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