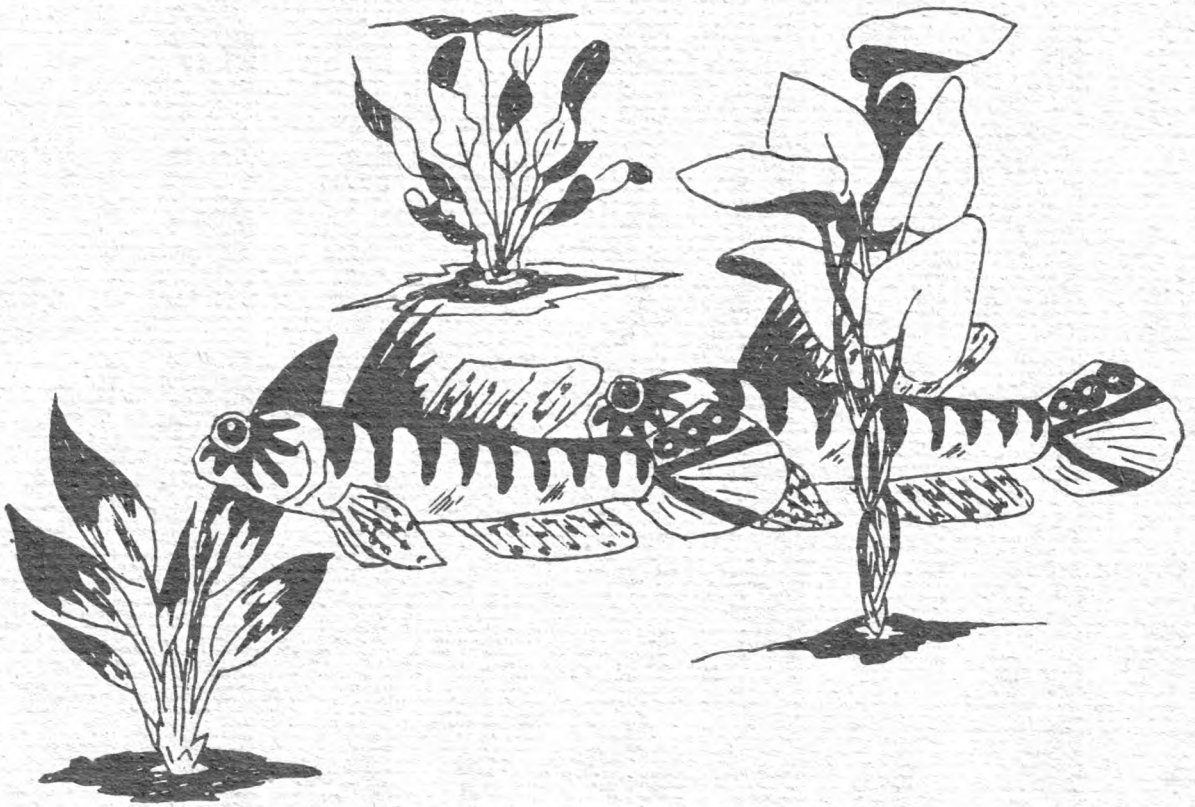


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DARTER



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Bogackis, Kusters, Hopfingers, Carol Willemin, Klaus Bertich, Frank Simmons and Ralph Wilhelm

TABLE OF CONTENTS

February, 1977
Vol. 3 No 2

President's Message	Ralph Wilhelm	6
February Meeting Notice		7
January Council Minutes	Barb Pozaric	8
January General Meeting Minutes	Barb Pozaric	8
Treasurer's Report	Tom Hopfinger	10
Editor's Message	Charlotte Hopfinger	13
Visiting Our Members	Klaus Bertich	14
The Native Corner	Rick Smith	15
Point Totals For 1976	Carol Willemin	17
Spawning Carassius Auratus	Carol Willemin	19
Book Reviews	Marilyn Waterston	25
Beautiful Black Angelfish	Don Walz (Reprint)	28
A Lesson About Pelmatochromis pulcher	Jim Bogacki	31
M.A.S.I. Show and Workshop - 1977		35
Winter Weekend Workshop - 1977 - Memphis		41

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THE DARTER - M.A.S.I.
9407 Tilles Drive
Brentwood, Missouri 63144

Failure to receive three consecutive issues of a club's publication will be considered as a termination of our exchange with that club, unless advised to the contrary.

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Monthly issues of The Darter are part of membership consideration.

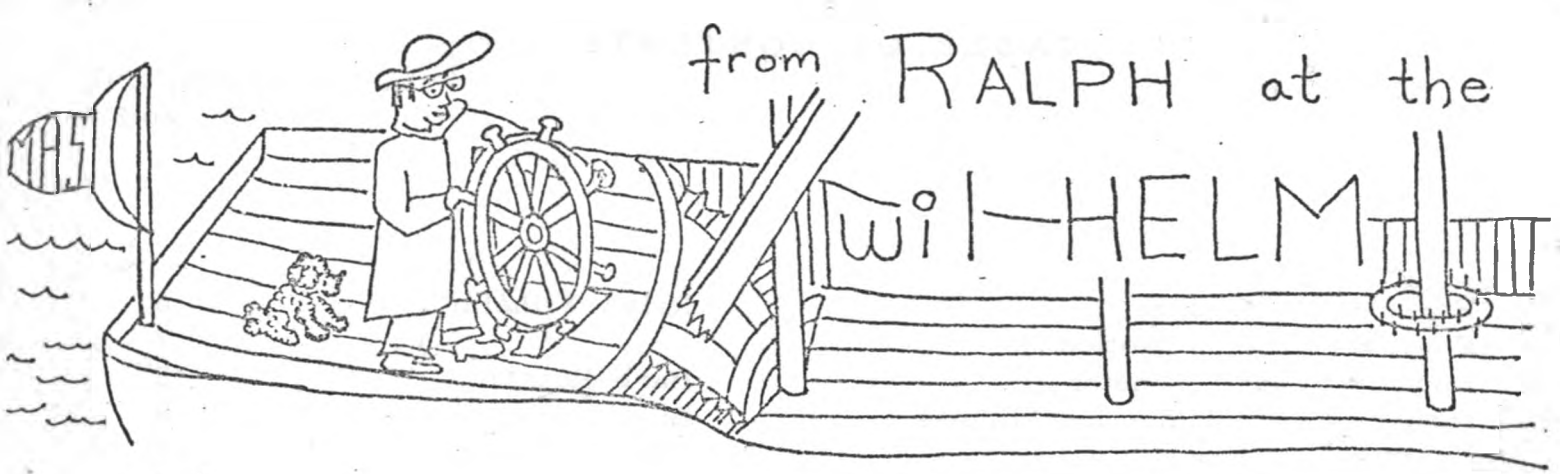
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Opinions expressed by the contributors are their own and do not necessarily reflect the opinions of the Missouri Aquarium Society, Inc.



At last months meeting I had the pleasure of announcing the winners of the annual awards for Member, Hobbyist, and Novice of the Year, and for the Bowl Show Champions. You will find their names elsewhere in these pages, but the entire issue is not big enough to list the praise due them.

These awards were earned by much effort, not to win a trophy, but more as a by product of participating in club activities. That is why I believe all of the winners will agree with me when I say that the true reward is not the trophy, but the recollections of the year for which it was awarded. It will recall the toil and drudgery of the work you did alone - cleaning tanks, washing gravel, changing water - and the pleasure and enjoyment of the tasks you shared with others - collating, auctions, shows. It will bring back the hospitality you enjoyed when you were welcomed into many homes for meetings, or a party, or just a visit to the fishroom. It will make warm again the kindness and consideration of you fellow hobbyists who were concerned if you were ill, or who invited your company on a trip to that out-of-town show. It will renew your appreciation of their generosity when they made you a gift of some of their favorite baby fish, or even that beautiful adult fish that you admired so much. It is not something made of wood and brass and plastics, but rather a tapestry of memories, created by many weavers over a full twelve months.

Every aquarium society should have a sign over its portal - "Through these doors pass the finest people in the world!", and our awards winners should be the first ones through.

Americans Spent \$665 Million On Home Aquariums In One Year

Nine million of the estimated 65 million households in the U.S. have aquariums.

So reports Pet Supply magazine, which also said that in 1975 - latest year for which complete statistics are available - \$380 million was spent on tanks, filters, pumps and other equipment.

In the same year, \$200 million was spent on the purchase of fish and \$85 million on fish food.

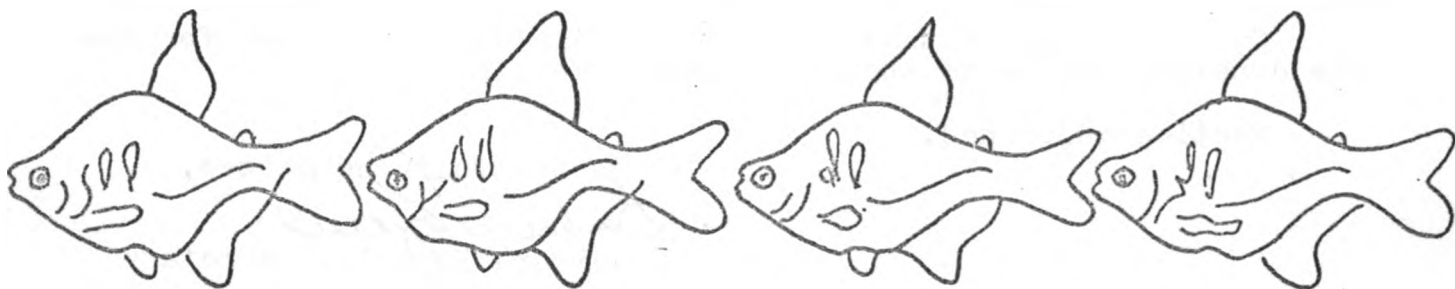
Submitted by Jim Bogacki

FEBRUARY MEETING · NOTICE

Time and Date: 8:15 P.M. Wednesday February 9th

Place: Prudential Savings and Loan
Community Room 6th floor
8020 Forsythe; Clayton, Missouri
Park in garage - lower level

Bowl Show: Killifish - all varieties
Sharkes and Loaches - all varieties
Open



JANUARY BOWL SHOW RESULTS

	<u>Hobbyist</u>	<u>Novice</u>
Catfish	(2 Entries) 1. Carol Willemin 2. Rick Smith	(No Entries)
Anabantids	(1 Entry) 1. Bill Miskelly	(1 Entry) 1. Mary Rhomberg
Open	(2 Entries) 1. Carol Willemin 2. Rick Smith	
February -	Killifish - All Varieties Sharks and Loaches - All Varieties	
March -	Guppies - Female Only Swordtails - Hifin or Lyretail	
April -	Bowl Beautiful - No restrictions, do your thing Saltwater - No adaptations, mollies, swords, etc.	
	Each Month - Open Class	

EXECUTIVE COUNCIL MINUTES

The Executive Council of MASI was called to order by the President, Rapph Wilhelm, on Wednesday, Jan. 12, 1977 prior to the regular monthly meeting.

Present were; Ralph Wilhelm, Tom Hopfinger, Barbara Pozaric, Carl Berry, Frank Simmons, Dave Masters, Paul Powell, Rich Crabtree, Jim Bogacki.

Minutes of the previous meeting were approved as printed.

Mr. Wilhelm announced that the January Council meeting will be held at the Copes on Jan. 15, 1977.

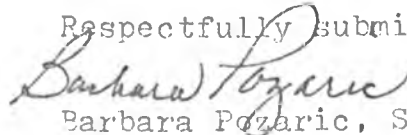
Tom Hopfinger presented a recap of the club's income and expenses for the year 1976.

It was moved, seconded and approved to order a subscription to Bunderbartsch.

Carl Berry asked that the Council finalize the prizes for the big donation raffle at the Jan. Council meeting.

Meeting adjourned.

Respectfully submitted,



Barbara Pozaric, Secretary

Monthly Meeting Minutes

The regular monthly meeting of MASI was called to order by the President, Ralph Wilhelm, on Wed., Jan. 12, 1977 at Prudential Savings and Loan.

Mr. Wilhelm welcomed guests and new members and announced that voting for Member of the Year would be by secret ballot.

MIBB auction, Jan. 23 at Holiday Inn North. Barbara Powell has numbers for buyers and sellers.

Lewis and Clark Show and auction, Jan. 30 at Holiday Inn North.

Dues for 1977 are payable tonight. There was no raffle held as no prizes are available to warrant it.

Breeder's Award fish tonight are Calico orandas from Carol Willemin.

Mr. Wilhelm reminded the membership to sell ads for the DARTER. \$60 full page, \$40 $\frac{1}{2}$ page and \$10 business card. Monthly rates are available. Be sure to mention your club affiliation when shopping the shops who advertise in the DARTER.

Diet 15 consumer reports are due tonight.

Minutes of the December meeting were approved as printed.

Treasurer's report received and filed subject to audit. Tom Hopfinger presented a recap of 1976 expenses and income.

Minutes (con't)

The Fish Raising Contest will have to wait for better shipping weather.

Ken Cope presented the awards for 1976:

In the Novice division of the Bowl Show -

3rd place - Carol Willemin
2nd place - Ola Sommerhauser
1st place - Ken Sommerhauser

In the Hobbyist division of the Bowl Show -

3rd place - Klaus Bertich
2nd place - Bill Miskelly
1st place - Alden Joice

Third and second places received Certificates and the first place winners received Trophies.

A desk set was the award for the author of the Best Article written for the DARTER in 1976 - Carol Willemin.

NOVICE OF THE YEAR - CAROL WILLEMIN

HOBBYIST OF THE YEAR - KLAUS BERTICH

Charlotte Hopfinger, Editor of the DARTER presented Certificates to other authors along with her thanks -

Ken Keim
Ken Sommerhauser
Rick Bragga
Marilyn Waterston

Rick Smith
Joy Bogacki
Klaus Bertich

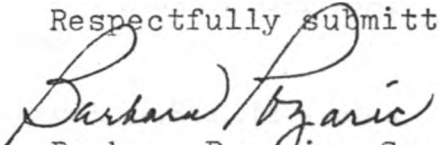
MEMBER OF THE YEAR - 1976 - TOM AND CHARLOTTE HOPFINGER

Door prizes were awarded (we can all win something).

Carl Berry talked about the big donation raffle and how the distributin of tickets is to be handled.

Meeting adjourned.

Respectfully submitted,


Barbara Pozaric, Secretary

TREASURER'S REPORT

Balance as of December 22, 1976		\$2906.66
	Income	\$ 154.50
	Expense	<u>\$ 543.97</u>
Balance as of January 22, 1977		\$2517.19

Income:

Memberships	\$ 130.00
Refreshments (2 months)	\$ 10.50
Breeders Award Auction	\$ 4.00
Darter Advertising	<u>\$ 10.00</u>
Total Income	\$ 154.50

Expenses:

Ace Office - January Darter	\$ 47.81
Ace Office - Darter Supplies	\$ 3.31
D. Koran - December Program	\$ 10.00
K. Cope - Year End Supplies	\$ 8.54
ACA Magazine Subscription	\$ 7.50
S. Kuster - Darter Supplies	\$ 10.93
Trio Bowling - Trophies	\$ 73.05
C. Hopfinger - Darter Awards	\$ 2.09
U.S.P.O. Darter Postage	\$ 11.92
Secretary Of State - Annual Corporation Registration	\$ 1.00
A. Antenna TV - Annual Drawing TV Set	<u>\$ 367.82</u>
Total Expense	\$ 543.97

Cash on hand	\$ 28.75
Deposit - Prudential Savings & Loan	\$1515.57
Deposit - Hampton Bank	\$ 952.87
Deposit - U.S. Postal Service	<u>\$ 20.00</u>
	\$2517.19

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COMING EVENTS

- February 9th - M.A.S.I. general meeting - Prudential Savings
- 18th 19th & 20th - Winter Weekend Workshop - Memphis, Tenn.
See complete details in this magazine
- 26th - M.A.S.I. Executive Council meeting - Powell's - 8P.M.

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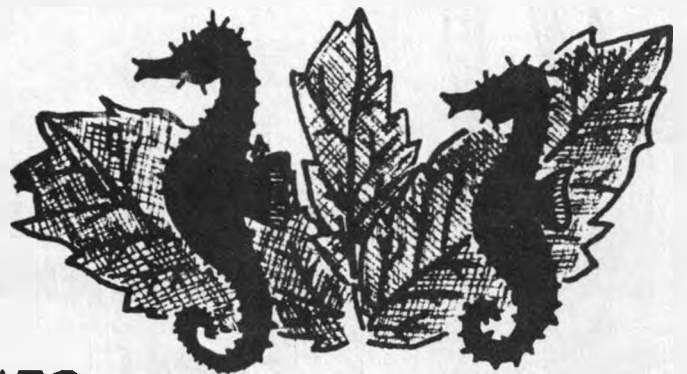


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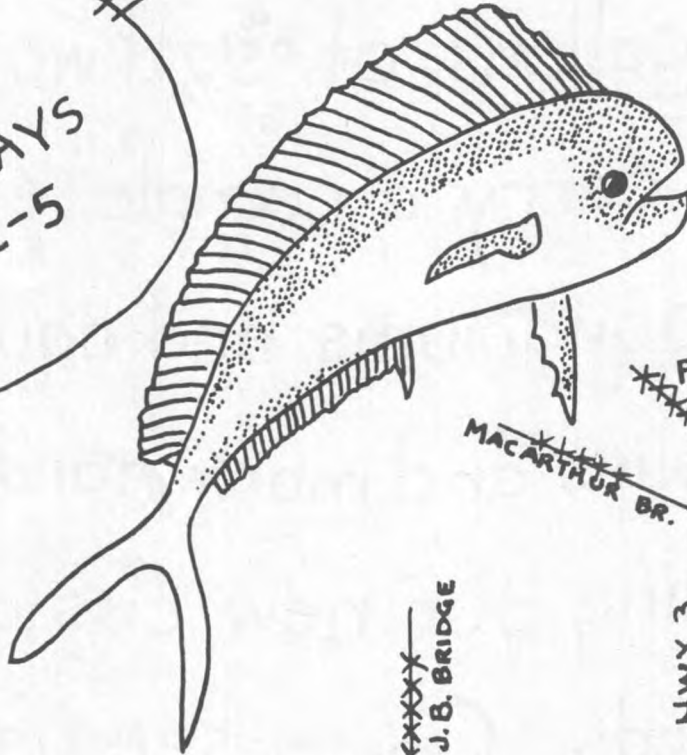
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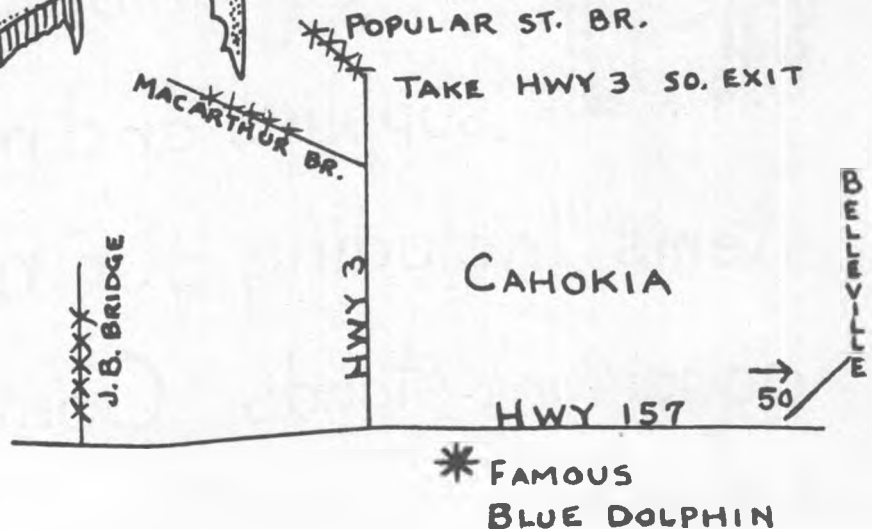
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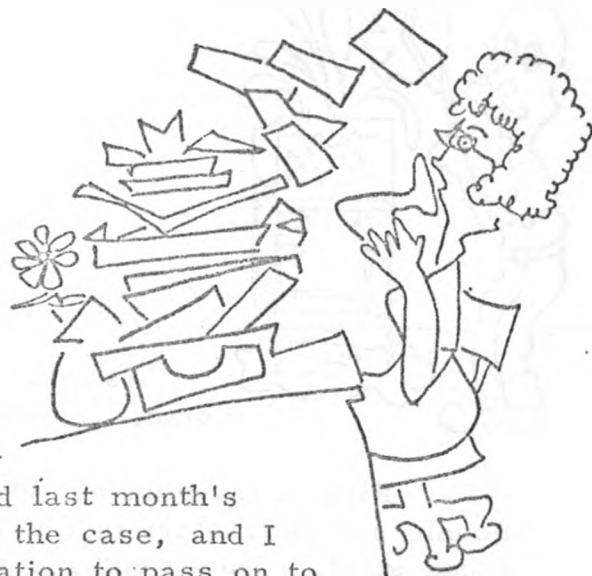


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EDITOR'S MESSAGE



It's hard to believe that it's that time again when the paper is due at Ace Office Supply for another issue. It seems like we just collated last month's mag just a few days ago. However, such is not the case, and I will collect a few words of "wisdom" and information to pass on to all of our Darter readers.

First and foremost in my mind for the month of February is the Winter Weekend Workshop (WWW - 1977) to be held February 18 - 20 in Memphis, Tennessee. Now to be sure, this is not to be missed. If you have any chance at all to depart for that weekend do take the opportunity to enjoy some of that good ole southern hospitality, and spend the weekend with other hobbyists from the mid-west talking fish, fish, fish for three lovely days. For those mates that would rather eat fish than talk about them (my, my, who does such a thing?) there are other things to do in the fair city of Memphis including enjoying some fine dining. Do read some of the printed details about this coming event in this issue of The Darter. I do know that some of our members are going, and perhaps we can share some rides together. If you need more information than is printed please call Tom or me and we will be glad to try to answer your questions. (962-1505)

You know it is nice to be missed sometimes and then to read about it - well, golly you often feel that what you write most of the time goes unread, is overlooked, or is thumbed over. However, I wish to personally thank Suzy Kihlander and Gerrie La Coste of the Tacoma Aquarium Society who publishe the excellent magazine The Aquarian for saying that they miss the goldfish articles that I had been writing for The Darter. I know that I wrote the column for 2 years and began running out of time after I became editor to get so many things together. Thank you, girls, for noticing that the column has been missing. P.S. Suzie, were glad you're feeling better and will once again lead the TAS for another year.

You will read a reminder for at least another three months in this Editor's Message about our M.A.S.I. workshop and show on April 22 - 24, 1977. We could call it the "F.F.F. - 1977 - Fish, Frolic and Fun weekend". Many hours of planning and work are going into the preparation for a super hobby event. DON'T MISS IT! Circle the dates now so you don't make any other plans and forget. M.A.S.I. needs your support so we can continue to sponser such a big endeavor each year.

Don't forget about selling ads for The Darter. We need new ads and will be trying to renew the current ads which are running out. Keep plugging, Gang.



VISITING OUR NEW MEMBERS

by Klaus Bertich

As you all can see I've changed the title a little for this month. I took the new members this month for my topic.

First I traveled out to Arnold and visited with the Korans. Dave and Bonnie got their start in Chicago in an apartment. They really got off to a bad start. They went and bought a new 10 gallon slate bottom tank, took it home, and it leaked. They then decided to take the tank back but replaced it with a 20 gallon, and then there were two.

Dr. Koran specializes in Killifish. This is the first home I've had the pleasure to visit that had a variety of Killies. Dr. Koran is always willing to help anyone get a proper start in Killies or to get a start in the American Killifish Association. He also belongs to the B.K.A., D.K.A. and I would assume a few more. If you desire a certain type of Killie I'm sure he would be more than willing to help. Dr. Koran also got a club started in Cincinnati.

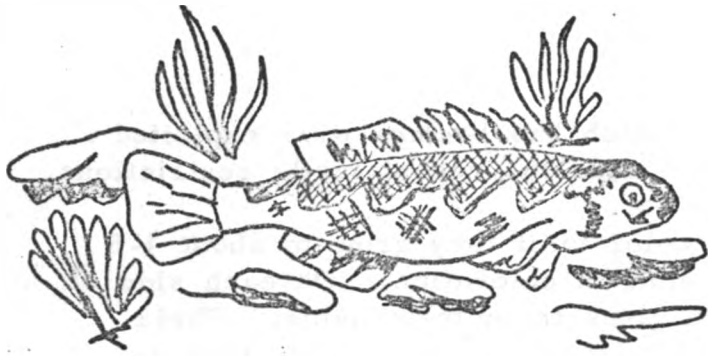
I also had the pleasure to visit with Miss Beatrice Schulz. Miss Schulz has had fish in her home for about three years. She has not been in the hobby for a very long time, but what she does have is properly set up and looked very neat. She doesn't specialize in any fish in particular. She has guppies, neons and angels. Miss Schulz raises fish for her own use and doesn't sell any to the shops. She uses our hobby as just that, a hobby. She has a twenty gallon tank in her living room and a few tens in the basement. Miss Schulz just likes to sit and watch. This is very good for your nerves I understand. Maybe I should try it?

Miss Schulz joined our club to learn more of her little fishy friends. Good for you, Miss Schulz and welcome to the group. We hope to see you at all the meetings.

I also went to see the Audrains: Vincent, Clair and Vincent Jr. The Audrains are former members from some time ago. Mr Audrain was quite involved with our clubs start and the running of it at one time. Mr. Audrain was president elect and then president and treasurer. I asked how he liked being active in the club, and he expressed a possibility of getting into the club's machinery again.

The Audrains had no fish at the time of my interview, but they are hoping to get into the fish business sooner or later.

Cont. p.16



THE NATIVE CORNER

by Rick Smith

TURTLES

Part One - Order: Chelonia

This month we will leave our finny friends and take a look at a few turtles which you might come in contact with while out on a collecting trip. The history of turtles is a long one as turtles have been around long before the dinosaurs trembled the earth. I will assume that you all have seen at least one turtle at some point in your life, so there will be no need to describe the turtles general shape and appearance.

First, let's look at the shell of a turtle. The top part of the shell is called the carapace and the bottom is called the plastron. Two plates on each side of the turtle connect the plastron to the carapace. These plates are called the bridge. The turtles mouth has no teeth, but a set of jaws called the "Beak" make an excellent crushing unit. Turtles don't have very good senses except for touch. Caring for turtles is fairly easy. They require feeding every other day. A light should be provided for them to bask in.

Tortoises (land turtles) are more intelligent than the (aquatic) terripins. Aquatic turtles are best kept in a bare tank except for a smooth rock or floating drift wood for them to bask on. The tank should be cleaned at least once a week. The old water makes excellent plant (terrestrial) water because of its nutrients.

Terrestrial turtles or tortioses can be kept in a terrerium, empty aquarium, a box, or an out door pen during the summer. They too need a light as well as a shady spot. Their quarters should be cleaned every week also. Make sure that they have a bowl or jar lid of water which is full at all times. I personally think that it is best to keep them in a box with a newspaper lining. This method is easiest to clean.

In what ever you keep turtles, make sure that they are in a reasonably clean environment, with plenty of room. Most turtles are omnivores and can be fed dog food, fish, lettuce, tomatoes, water sprite, shrimp, and worms. Do not feed them commercial turtle food because most of these foods are in insufficient diet. Like fish, you should alternate the foods to give them a variety.

The Red-Eared Mudslider *Pseudemys scripta elagans*.

cont. p.16

THE NATIVE CORNER CONTINUED:

The red ear is a common turtle, which has become over exploited and could be seen in almost any pet store until the recent turtle restrictions.

The hatchings are lime green in color until they grow to about 4-5 inches at which time they become more dull in coloration. On each side of their head is a red-orange splotch which gives them their name. Their legs are pin striped and their shell's carapace has pinstriped designs on each plate. The plastron has circular darkish rings on each plate. Red ears grow up to 12 inches. Males have longer front leg nails and rails. Females are usually larger. They live in almost every aquatic environment in Missouri, and they are very commonly seen when floating down an Ozark stream. They eat fish, aquatic plants, and invertebrates.

Map turtles or Sawbacks - Family: Graptemys.

There are nine species of Map turtles, and they all live in the mid-west and east.

G. geographica

The common Mapturtle

These turtles look very much like sliders, except they lack the red-orange splotch. Instead, they have a yellow spot on the sides of their head. They have very broad heads equipped with a very powerful set of jaws which they use for crushing freshwater clams and mussels which are a favorite food. They are fairly shy and are usually nocturnal feeders. Their shell markings resemble an aviators type of map (hence their name). The females' markings may be a little obscure. They have a low shell like the red ear. Maps grow 4-10 3/4 inches in length and prefer fairly deep water. Females are usually larger and have thinner tails. When a female lays her eggs they number from 10-16 and have bright lines. These turtles are carnivorous.

Next month Part 2 - Softshells, Snappers, Musks, and Box turtles.

VISITING OUR NEW MEMBERS CONTINUED:

The Audrains had raised angels, mollies and guppies and bettas. They also expressed a desire to get back into bettas.

Well, that is all for this month. I wish our new members a big welcome and the best of luck.

DUES ARE DUE DUES ARE DUE DUES ARE DUE DUES ARE DUE DUES ARE DUE

POINT TOTALS - 1976

We are listing here only the winners in the Monthly Bowl Show contests and to the 5th place in the Hobbyist and Novice of the Year contests. Lack of space prohibits a complete listing - If you have any questions contact our Points Tabulator - Carol Willemin.

MONTHLY BOWL SHOW

HOBBYIST

1st - Alden Joice 51
2nd - Bill Miskelly 30
3rd - Klaus Bertich 26

HOBBYIST OF THE YEAR

1st - Klaus Bertich 241
2nd - Charlotte Hopfinger 227 1/2
3rd - Joy Bogacki 212
4th - Ralph Wilhelm 164
5th - Marilyn Waterston 144

NOVICE

1st - Ken Sommerhauser 80
2nd - Ola Sommerhauser 45
3rd - Carol Willemin 20

NOVICE OF THE YEAR

1st - Carol Willemin
2nd - Rick Smith
3rd - None eligible
4th - None eligible
5th - None eligible

There were some members with more total points for the Novice and Hobbyist of the Year awards than some of those who received the awards. They did not receive awards because they were not eligible due to the minimum point requirements in certain categories.

THANK YOU TO OUR DONORS

The Missouri Aquarium Society, Inc. greatly appreciates the generosity of the following members and manufacturing firms for their donations in support of our society and its activities:

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Mardel Laboratories	Dave Masters
Marineland Aquarium Products	Ralph Wilhelm

Please remember that DUES ARE NOW DUE FOR 1977. The March issue of The Darter will be the last one you will receive if you are not paid up for 1977. There are a lot of benefits in being a member of M.A.S.I. Stay in the club. Bring in new members and stay or become active in all our programs and on committees. Remember - you only get out of any organization what you put into it. Help support us in 1977 and be an important part of our growth. We hope to see all our members at the February meeting. The last two months attendance has been down. We are all accustomed to the cold and snow now so don't let that be the reason you are not attending. Remember we park inside the garage. See all of you on February 9th.

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SPAWNING CARASSIUS AURATUS

By Carol Willemin



My first successful spawning of Carassius auratus took place late last October, a time of year not generally considered ideal for spawning Goldfish. The conditions which gave rise to the spawning were not intended to induce a spawn, but were directed towards saving the life of a dying tankmate (in this I was not successful).

Tank conditions were as follows: Five Goldfish were housed in a 29 gallon aquarium; two Calico Orandas of about 3 to 3½" size, two 2" Red Lionheads, and one 3" Red & White Ryukin named Marshall. It was Marshall who was dying—he had become a constant "bottom squatter" during the past few weeks, and when he did get up to swim, he was unable to maintain any kind of balance.

The tank was maintained as follows: Three filtration methods were used; an undergravel filter, a large box filter inside the tank, and an outside power filter. In this way, no matter which filter was being changed, there was always some "good-guy" bacterial action being maintained. PH was decidedly acid, and about 1 tsp. of salt per gallon was maintained. Filter carbon was used in the power filter only. Water changes were made not as often as would be ideal, and probably averaged about a ¼ change every 10 days to 2 weeks.

During my final attempt to save Marshall, I had changed slightly more than half the water (being careful to adjust the PH of the new water). It had rained the day before, so I went to the garden for earthworms and fed everyone a liberal quantity of them. Everyone except Marshall, who just could not get up to eat. By Friday afternoon, Marshall's condition had worsened to the point where he was lying on his side most of the time, and I put him out of his misery. Saturday, I paid little attention to the four remaining Goldfish in that tank, other than feeding them the rest of the earthworms I had brought in.

Sunday morning I didn't make it down to the fish room until almost noon. There was a fish auction that afternoon, and I almost didn't make it down to the fish room at all before leaving, but somehow it didn't seem right to run off to a fish auction leaving hungry fish at home, so I decided I had time to feed them before leaving. When I turned on the light over the Goldfish tank, I saw all four occupants studiously nibbling at a small bunch of Anacharis. This struck me as very odd, since Anacharis is one of the few plants that Goldfish can't eat because of it's toughness.

Continued.....

The Goldfish should have rushed to the surface to be fed as soon as I appeared, but instead they just kept on nibbling at the bunch of Anacharis. Upon closer inspection, I saw why..... here and there, in the leaf axils of the plant, were eggs that as yet remained uneaten.

I hesitated to consider what I wanted to do. Twice before, I had found the remains of a spawn in that tank and had tried to save the eggs. Once there had been about 20 of them, but they had fungused. There seemed to be so few of them now that I wondered whether it was worth another try. Employing the old "it can't hurt to give it a try" philosophy, I rushed to the kitchen for a container; everything in the fish room was in use.

I grabbed a medium size mixing bowl and filled it with water from the tank, pulled out the Anacharis, and placed it in the bowl. I considered adding an airstone or some anti-fungal agent, but there were so few eggs left that I decided to leave it as it was and went to the auction.

Since Goldfish normally spawn in the early morning, over a period of several mornings, I planned to be down in the fish room early the next day. Most of all, I wanted to see which of the fish were spawning, since I had not yet determined the sex of any of them. None of them had shown any of the usual signs; i.e. tubercles on the male, driving of the female by the male, etc. Perhaps tomorrow some of the mystery would be solved, and I might have more eggs to work with.

Monday morning found this usually late riser stumbling around in the pre-dawn darkness of the fish room with a flashlight..... mustn't interrupt the course of events by turning on any lights. I found a chair near the Goldfish tank and waited for first light to begin coming through the basement windows, certain that I had a first-row seat for what was to be a big event. To make a long story shorter, what happened was.....absolutely nothing! By mid-morning, I resigned myself to the fact that it was all over, and I had missed the opportunity to witness the spawning.

Attention was now turned to the contents of the mixing bowl. Some of the infertile eggs had begun to grow cloudy, and I began to suspect that all that had taken place was that an over-ripe female had dumped her eggs. By the next day, some of the eggs were completely white, but closer inspection found some of them were still clear, and the clear ones were showing "eyes"! By Wednesday, the infertile eggs were completely fungused, and fearing that the fungus would spread to the fertile ones, I prepared a new place for the good eggs (this time my large mixing bowl), and proceeded to separate the good from the bad by picking the fertile eggs off the Anacharis by hand, and placing them in the larger bowl.

Continued.....

I'd assumed there were only a couple of dozen good eggs, but to my surprise, there were 153....it's amazing how many eggs can find refuge in an Anacharis plant.

This process of separating took about an hour, and midway through that, some of the eggs which had already been moved to the new bowl began to hatch before my eyes. Upon hatching, the tiny fry would wriggle to the surface (I later learned this was to get a gulp of air for their swim bladder) and then crash helplessly to the bottom of the bowl.

By Midnight, about half of them had hatched, and by the next morning, three-quarters had done so. The fry lay on the bottom and sloping sides of the bowl, evenly spaced at intervals. They were very tiny, and looked like a bowl full of baby's eyelashes to me. It was difficult to convince my husband that they were fish at all...he was certain they were some sort of insect larvae, and said he'd believe they were fish when they were swimming around, and looked like fish.

Some of the fry took longer to hatch, but all had done so by the 5th day after the spawning. None became free-swimming until the 6th day after the spawning. First food was strained hard-boiled egg yolk and vinegar eels. After that, feeding consisted almost exclusively of live baby brine shrimp until larger food became a necessity.

Six days after hatching, the fry were moved to a partially-filled 10 gallon tank. Since they were too delicate to net them, bowl and all were simply lowered into the water. It wasn't until later that I learned that a shallow water level is essential for Goldfish in the early stages of their development. Lucky again!

Since many inferior specimens are normally produced in any Goldfish spawn, and the fry need plenty of room to develop properly, the first culling took place when the fry were approximately three weeks old. The following were culled and used as "feeders": 5 with single tails; 1 defective spine; 2 tiny runts; 24 with narrow, webbed tails (Oranda standards require a caudal fin which is divided along the top margin). Since the great majority of the fry were nacreous or "matt" rather than metallic, and all but two showed perfect dorsal fins, I decided at last that it was the Calico Orandas that had spawned...this is substantiated by the fact that the Lionheads were probably too young to spawn yet anyway.

At about four weeks of age, the fry really began to look like miniature goldfish. No color developed until about six weeks, at which time some developed some black areas and some showed patches of pale orange. By this time, they were spread out in one 20-long, one half-filled 20 high, and the original 10 gallon.

Continued.....

As much as I would have liked to keep them all (what could be more appealing than a baby Goldfish?) space didn't allow me to do so, and once again they were culled, and the extras sold at auction. At this writing, the remaining 40 or so fry are about 10 weeks old and are about 1½" long (including the caudal fin). There are eight metallic ones that have not yet decolored, and it will be interesting to see what lies underneath when they do. The rest are almost completely nacreous, that is, having non-metallic, non-reflective, transparent scales. Some of them have not yet (and may never) color up, and remain a rather pinkish, transparent color. Others are beginning to look quite "calico" with their black and orange areas, although they do not yet show any of the elusive and highly desirable "blue" coloring. This "blue" color is not a true pigment, but is what we see when black pigment is buried more deeply under the transparency. I hope that this will develop with time. Quite a few that I'd thought had divided caudal fins did not, the fin being divided only towards the end. Whether or not any "hood" development will take place remains to be seen, and I try to provide live foods as often as possible to encourage such growth.

Goldfish genes being as unpredictable and prone to regression as they are, it would be ridiculous to hope for a show quality fish from such a spawning, especially since neither of the breeders are of show quality. But then, there is one little fish....he's beginning to color up nicely, his body and fins are well-proportioned, and the caudal fin is divided.

Who knows? Just maybe.....

* * * * *

(Author's Note: The foregoing article is intended only as a beginners account of her first experience with Goldfish breeding, and any desirable information gleaned therefrom would in all probability be purely accidental. For some excellent, detailed information on the particulars of Goldfish breeding, see the publication of the Goldfish Society of America, entitled Goldfish Beginners Guide. Chapter II, Goldfish Breeding, is hot off the press, and offers excellent information and photographs. For further information, write to Sue Law, 1510 William Way, Concord, California, 94520.)

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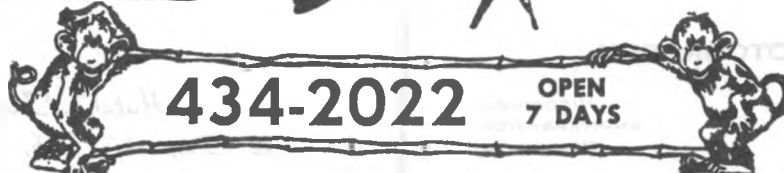
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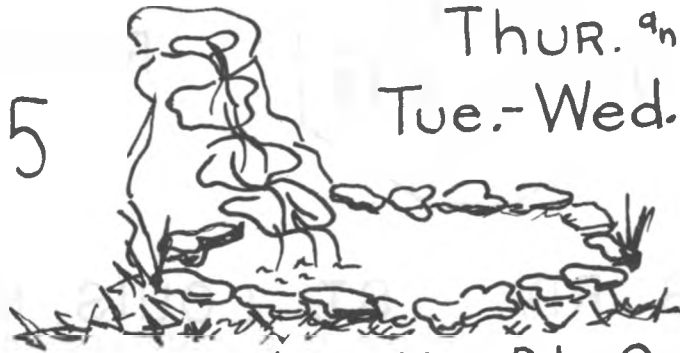
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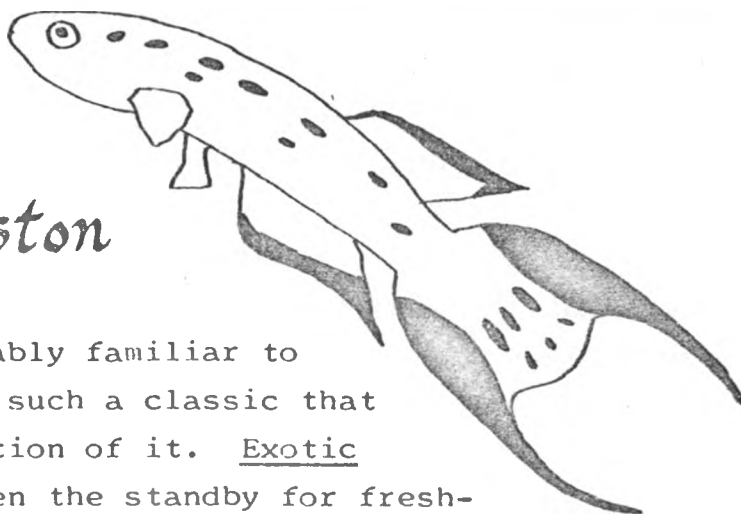
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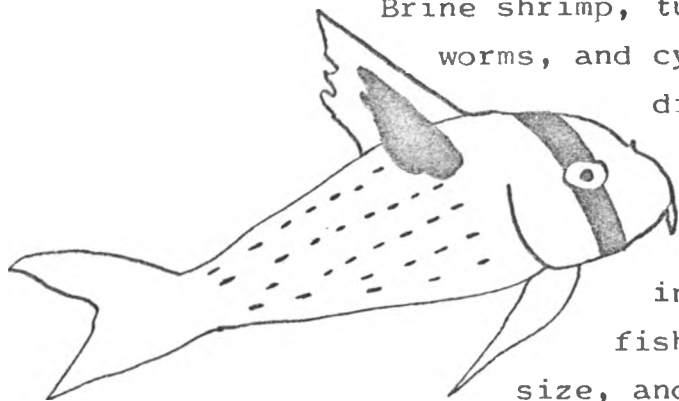
Book Reviews By Marilyn Waterston



The Innes book is probably familiar to almost all of us, but it is such a classic that I feel that I must make mention of it. Exotic Aquarium Fishes has long been the standby for freshwater aquarists. For years it has been touted as one of the very best books on freshwater fish on the market. I believe this to be true, but I do have some criticism that I will go into later.

When anyone asks what the best book to begin with is, I always refer them to the Innes book. Why? Simple! It will not steer you wrong. Every beginning fish-keeper should read the chapters on light, oxygen, temperature, and water quality. The section on general management should also be required reading for all beginners. In these chapters one can find all sorts of information from setting up a tank, cleaning it, and preventing and treating diseases in fishes.

Anyone interested in live foods for fish probably could benefit by reading the section on feeding, where foods such as Daphnia, Brine shrimp, tubifex worms, mosquito larvae, white worms, and cyclops, only to mention a few, are discussed. Helpful hints on collection of live foods and their storage are also treated fully.



The fish are examined as in many encyclopedias of fish: Each fish's habitat, breeding habits, color, size, and compatibility with other fish are discussed.

There is interesting information not covered in other books, concerning a variety of topics. In one such section Innes outlines eleven community tanks, ranging from five to forty gals. Lists of compatible fish for each tank are given.

There is also a section on wholesale breeding, which is very

interesting. Here in St. Louis we have no "fish farms" so this section was somewhat novel. In the same section is information on the long distance transportation of fish. Many people do not know how fish are transported long distances and this might make interesting reading for them.

Now I have one criticism; it is on the illustrations in the book. For the most part they are abominable. Guessing a species from a black and white photo is bad enough, but the color plates are even worse--the color is terribly distorted. But I forgive this sin, for one reason only--the price. In this day and age if you could find a book of this caliber for \$10, you would be lucky. But at most shops the Innes book sells for about \$5. I am sure that re-photographing all the fish would push the price to \$15 or more, so I forgive the bad photos in consideration of the low cost.

The second book I shall review for this month is Underwater Gardens, by Jack Kramer, Scribner's press. This book is difficult to review, because of the manner in which it was written. First, let me point out that it was not written by one who knew his fish. Most of the information concerning fish was blatantly second-hand, and often misleading. He may have had "help" with information on fish by the Steinhart Aquarium (San Francisco), but that is not the same as knowing the subject oneself, as it will be plain to see with a cursory examination of the text.

I cannot resist quoting a few passages that I found to be misleading, and at times even humorous. When discussing cichlids the author wrote "Cichlids can be aggressive and attack apparatus in water, so use outside filters and heaters". (Page 54). Included in the list of apparatus-destroying fish were *Apistogramma sortense*, Fire mouths, and Angel fish. How many filters and heaters have your Angels destroyed lately? I can just see a beginner who has a half dozen quarter-size Angels boasting about the deleterious nature of the pestilential Angels.

At another point the author suggests fish for an "Asiatic Seascape". If we are to take him at his written word, we are informed that fish for our Asiatic tank could include: Gold barbs, Tiger barbs, a male Betta, and various Gouramies. Somehow I am not too sure how

long the finnage of a betta would last with Tiger barbs. Certainly it is not something to recommend.

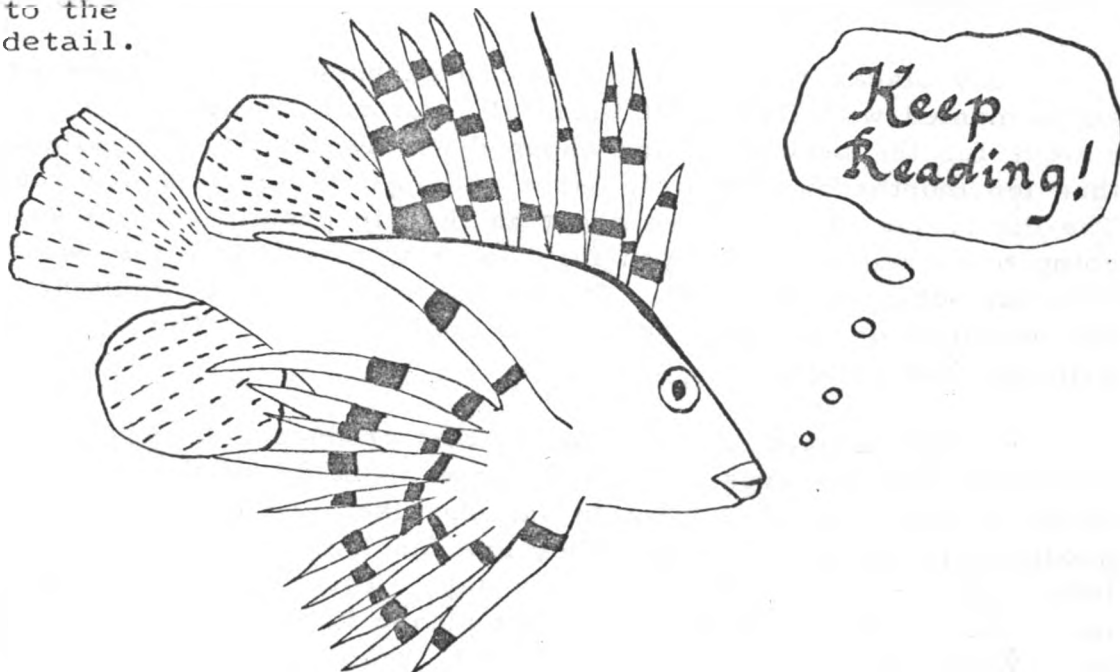
For a South and Central American Seascape the list includes; Blue acaras, Cardinal Tetras, Convicts, Glowlight tetras, Flame tetras, Discus, etc. My question is, are we to believe Discus and Blue acaras are compatible?

In the African division we find *Aphysemion australe*, *A. gardneri*, *Blue gularis*, Jewel cichlid, *Kribensis*, *P. Zebra*, and *Tropheus dubosi*.

It is readily apparent that he (hopefully) did not mean to imply that all the fish from each group could commingled. However, he never gives an adumbration of the problems encountered by blythely combining various species of fish.

There are many other things wrong with this book that I don't have time to go into. But it does have its good points. This man does know his plants. In fact, I think he would be most pleased if everyone set up their tanks and filled them with plants, and left out fish entirely. It has more information on more different kinds of plants than most books in the aquarium trade. His details on the plants seem to be more reliable than his treatment of fish, and most of the plant groups have representative photos or drawings.

One last comment that I cannot resist. In the acknowledgements he cites his photographer and artist, and thanks them for their help. I don't. Many photos are out of focus, and blurred-- a poor excuse for photography. The photographer seemed to have better luck with the plants, I guess stationary targets are easier to hit. The artist deserves more credit, even though some of his drawings of fish look like he used models that were deformed or dying of a hideous disease. His representations of plants, however, were amazingly accurate and on the point of being scientifically accurate to the smallest detail.



If you are into plants, then *Underwater Gardens* is a great book, and for the low price of 3.95, you can ignore the sections on fish. I might add this book is only to be found in book stores, as far as I know, and the club does not own it.

Comments on the Touchy, but

"BEAUTIFUL BLACK ANGELFISH"

By Don Walz

Although I don't have years of experience in spawning and raising angelfish, I've compiled some helpful (I hope) information on my favorite Angel, the black. I've heard about so many complaints and failures in keeping this beauty, that I thought any comments on this fish would be helpful, so here goes.

As everyone knows, black angels were developed by inbreeding. This, I believe, is one of the main reasons they tend to be so fragile. However, through scientific studies, there has been found yet another, perhaps even more important discovery, and that is the one I believe most people who have trouble keeping this fish overlook. The black pigmentation that makes this fish so beautiful requires protein to develop. It requires so much protein that, on a normal community tank diet, the fish may only be receiving about 25% of the protein it needs to grow and stay healthy. I'll make a comparison to help you understand more fully. Suppose a common angelfish needs a diet consisting of 45% proteins to stay healthy and grow to maximum size. A black angel will need the 45% protein JUST to make up its black pigmentation. So what is left to develop internal organs, bones, and flesh? Nothing!! Therefore by doubling this protein, you are giving your fish enough protein for its pigmentation and growth. This means very little dry food and a lot of live or frozen food. If you have black angels in your community tank, and you feed your fish twice a day, let's say, flake food in the morning and frozen brine shrimp at night. This, I would say, would be a good diet for your fish, but not a good diet for the black angels.

My blacks receive a diet of frozen brine shrimp three times a day, supplemented with live adult brine at least once a week, baby guppies twice a week for the breeders, and chopped earthworms when available. In less than ten months on this diet, those little \$1.49 specials are ready to reproduce. The diet I use in, I believe about as high in protein content as possible without going to extremes. Now you may see why this beauty just wastes away and dies without growing at all. If this has happened, the fault does not lie with the breeders or the shop owner who sold the fish. The problem has been with the fish's diet.

I have a pair of black angels that produce 400 eggs every two weeks. After hatching the eggs, I usually lose about 5% of the young in the eight weeks it takes to raise them to salable size. So far, no deformities have been produced in the young fish. They are fed live newly hatched brine shrimp twice and sometimes three times a day. This is a must. Maybe this doesn't mean too much to you right now but please keep this fact in mind as you read on. When you see some nice, perfect, healthy young black angels in the shops and you spend your hard-earned money buying some, remember you are probably buying fish that are eight to twelve weeks old, and fairly fresh from the breeder's tanks. This means that they are used to a diet of baby brine shrimp from the day they could eat until they are sold to the dealer. They are young and still at a very critical age. They may be able to take a change in diet for awhile but time will show what a change in diet at this

... their lives will do to them. So as soon as you purchase some

"BEAUTIFUL BLACK ANGELFISH" CONTINUED:

and put them in your tank, community or a tank of their own (the latter is best, at least for a few months) start pumping them with protein. This means brine shrimp, preferably live or adult frozen, if the fish are large enough to eat it whole. If not, shave it with a knife while still frozen. If you have chosen good stock and the time lapse between high protein diets hasn't been too long, your efforts will be clearly seen and very rewarding.

Now, if you are still interested, and would like to see your black angels spawn, keep reading. The details I have used successfully follow. The large scale breeders don't use this method because they are interested in quantity more than quality. They usually breed a black to a silver or black lace and settle for a percentage of blacks. I guess they just don't have the time to give the black angels the tender loving care they require. So, if you have the time and are willing to give them the tender loving care they need, here is how

- (1) Set up a fairly large tank, a twenty gallon high, or a 29 gallon, is fine.
- (2) Take the time to visit several shops, preferably far apart, in the same day or same weekend. The reasons for this are that it will lessen your chances of getting the same stock from the same spawn and inbreeding your fish even more than they already are. Also, it will allow you to introduce them to their new home at the same time. This may not seem important, but it seems that when a few angels are used to their home, they consider it theirs and don't like other angel intruders. This may not hold true all the time, but why take chances?
- (3) Choose only the fish that act lively and don't have sunken stomachs. Choose the largest in the tank, because they are usually the healthiest and first to get the food (after all, they didn't get larger than the rest by being at the end of the chow line.) Choose only the ones with perfect fins and shape as this will be passed on to the offspring. Choose them carefully. All the tender loving care and protein you can give them will not straighten a bent fin or widen a narrow tail. Don't waste time and money on inferior fish just because they are all the dealer has left. If this is the case, find out when he expects more and buy them as soon as possible. This will lessen the time that they aren't getting their high protein diet.
- (4) Obtain at least one dozen fish for breeding purposes as you can usually plan on losing a couple and if you had, let's say, four fish at six months of age, and lost one, you would probably have a rough time getting one of equal size. Blacks aren't always willing to pair off either. I don't know if it is due to sterility or what, but some will be just for show.
- (5) When your angels are ten months to a year old, start studying them. Watch for a couple staying off from the rest. Watch for the typical cichlid pre-spawning actions. When this is noticed, remove the other fish, or remove the pair to other living quarters. Feed them heavily for three or four days, and place a large piece of slate or a spawning strip in the tank. If nothing happens, place them all together again and see if they still stay off from the rest of the group. If so, separate them for one or two months. Feed

"BEAUTIFUL BLACK ANGELFISH" CONTINUED"

heavily and have patience. Try water changing and temperature changing, and keep in mind that the black angel is not as willing to spawn as the common or marble.

- (6) Once they spawn, remove the eggs as soon as possible. Place the slate in at least a two gallon container. Set up an airstone, as is the rule for hatching cichlid eggs. I have found that the only successful medication for eggs is methylene blue and nothing else. This should be added to the water at 20 (yer, twenty!) drops per gallon. You won't even be able to see the eggs without the use of a flashlight, but this is the only way to prevent fungus. Cover the container with paper or something on all four sides and top. Check with a flashlight every 12 hours or so for fungused eggs. You can remove them or just knock them off so they fall on the bottom. Keep the temperature at or above 80 degrees. This is important! The eggs should hatch in 3 to 4 days at this temperature. Twelve hours after hatching, siphon off 1/2 the water and replace it with fresh water of exactly the same temperature. Do this until the young are transferred to larger quarters. This also is very important. Sound like a lot of work? Well, it's not. To siphon off 1/2 the water, simply disconnect the airstone hose at the air valve and hang it at the center of the container and let the hose hang in a bucket and start the water flowing. No young can be siphoned out through the airstone, and besides, they will be at the bottom. Doing this consistently, the water will be fairly clean when the fry start to swim, in about 3 days after hatching. Now comes the next very important step to raise the 3 to 5 hundred young. You must feed these fry within the first four hours after they start swimming, and the food must be live brine shrimp, that is less than 5 hours old. So start your shrimp hatcher accordingly. Feed the young as often as possible, being careful not to overfeed. I only feed the young twice a day, but I leave in enough live shrimp to last an hour or two each time. This is the main advantage of using live over frozen. Frozen will start to decay almost as soon as it is thawed. Also, it may be too large for the fry to eat. Live shrimp will live one or two hours after being introduced to the fresh water. So, don't substitute. When the fry have been swimming for 24 to 48 hours the container should be placed in a bare tank of 10 to 20 gallon size, 1/2 full of water of 80 degrees. In a couple of hours, when the temperature is the same, empty the container into the tank, but remove the slate first. * The tank should have one or two sponge (and only sponge) corner filters in use before emptying the young into the tank. After the first week, the rest is normal cichlid fry care. In 18 days the young will have to be separated to another 10 or 20 gallon, if possible. To properly raise a normal spawn to eight weeks of age, you will need about 100 gallons of water, otherwise you will have a lot of short finned runts. So make room, and the fish will reward you accordingly.

In closing, I would like to ask your help, too. The propagation of this beautiful fish is far from being perfected. Therefore, if and when you are successful, please try to take the time to record your success exactly, and put it in writing in order to help other hobbyists. Maybe someday, if we all

"BEAUTIFUL BLACK ANGELFISH" CONTINUED:

work together, we can perfect and strengthen this beautiful fish so that healthy, pure black angels can grace everyone's tanks.

Reprinted from The Hub Bubble, Hub Aquarium Society, Crown Point, Indiana and Cichlid Chatter, Greater Chicago Cichlid Association, Chicago, Illinois.

A lesson I learned about *Pelmatochromis pulcher*

by Jim Bogacki

During the summer, if all you good people can remember back when everything was green, Joy and I moved to a different house. When we had the fish settled, everything started to spawn, at least we wished they would. Something that didn't start back up was our Kribs. They had been breeding regularly before.

I set out to correct the situation. I did the weekly water changes and fed very well, but it was to no avail. There were no little ones. So after a month I figured it was time to sit down and think back to when they were going strong down at the other house. Suddenly it hit me. At that time they were lucky to get a draining in four weeks over there because they always had fry. So to make this story short and sweet I didn't drain, and lo, and behold we had one big happy Krib family again.

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Sincerely,
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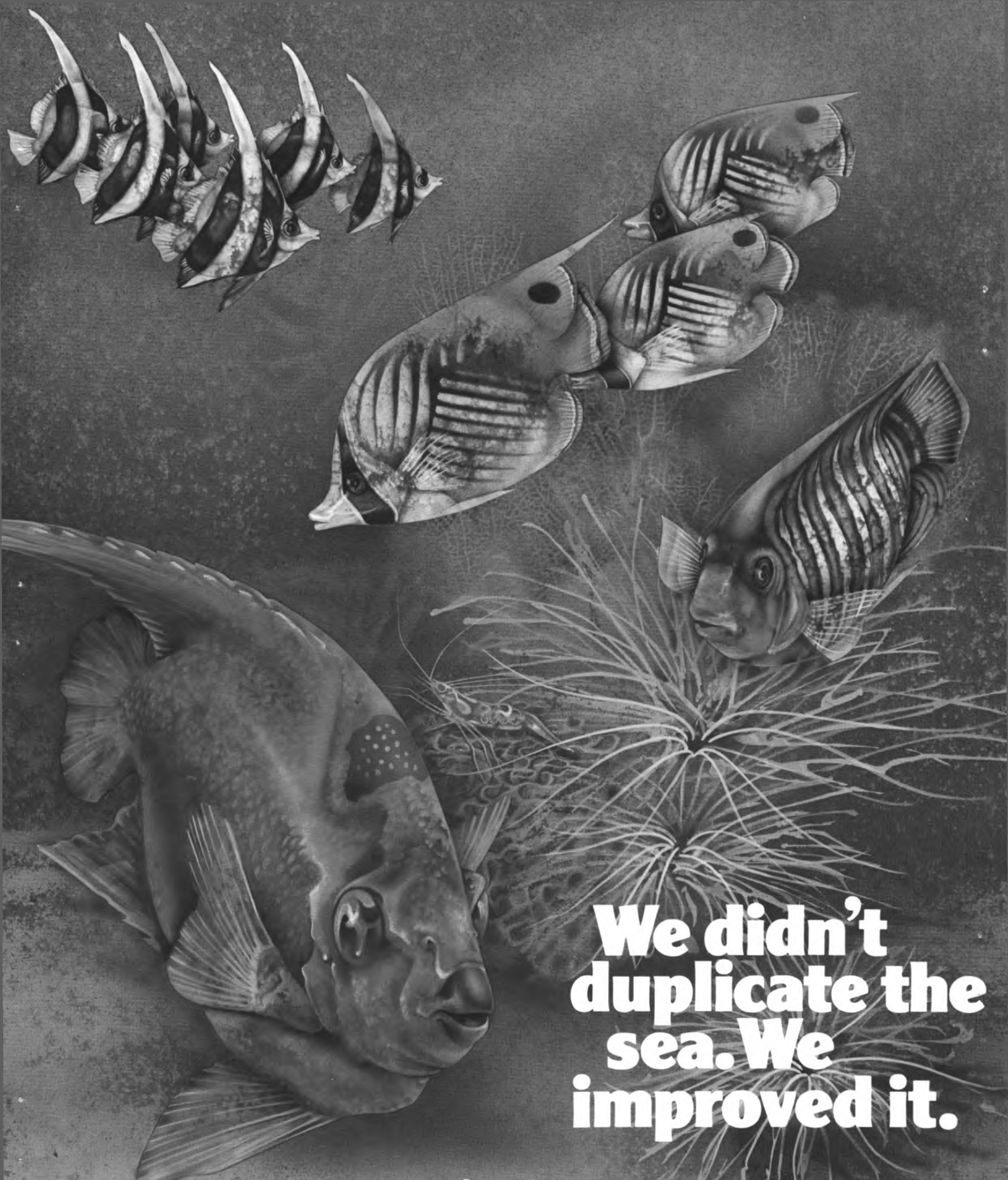
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Rick Bragga	Clown Loach	Cistana News
Joy Bogacki	Mooving with fish	Cistana Aquarium Club
Homer Arment	Stripping Mouth Brooding Cichlids	Splash Milwaukee Aquarium Society
Marilyn Waterston	Raising Mosquito Larvae	Wet Pet Gazette
Homer Arment	Raising Rift Lake Cichlids	Davies Aquarium Society
Carol Willemin	Aphyosemion gardneri	Davis, California
C. Hopfinger	Ah Sweet Mystery of Life	Pisces Press
Joy Bogacki	How to Feed Your Fish While Away	Nassau County Aquarium Society, New York



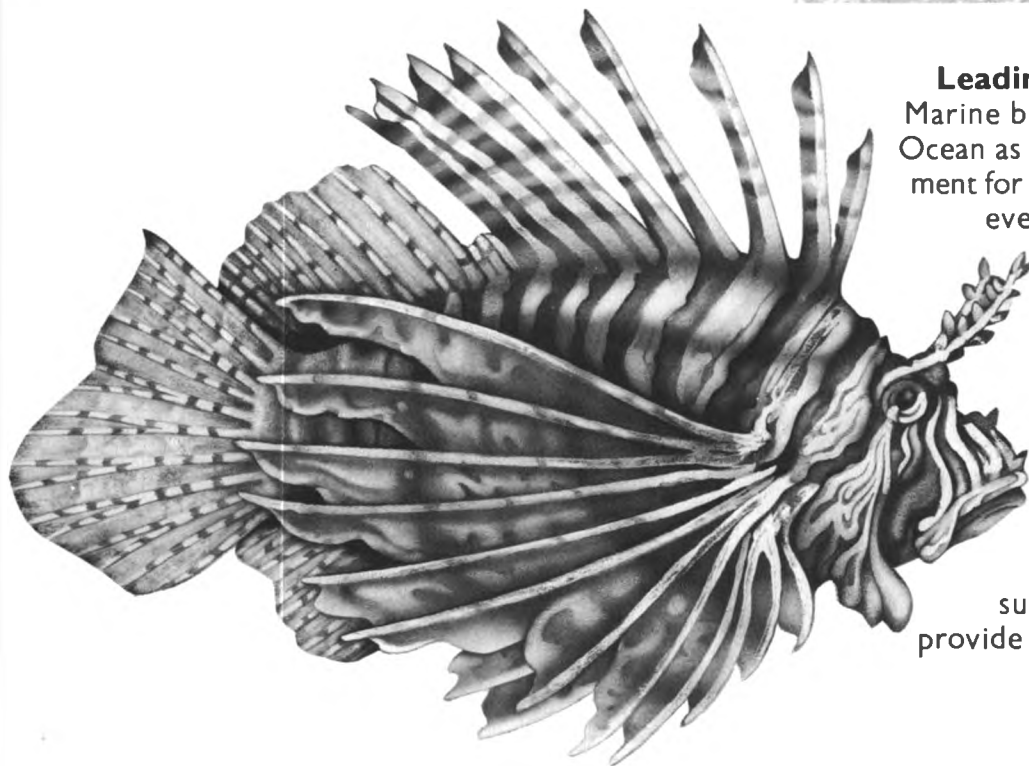
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THE MISSOURI AQUARIUM SOCIETY OF ST. LOUIS, MISSOURI

PRESENTS ITS

17TH ANNUAL AQUARIUM SHOW AND WORKSHOP

HOLIDAY INN, NORTH

Friday, April 22nd Through Sunday, April 24th, 1977

4545 North Lindbergh Boulevard
Bridgeton, Missouri 63044

Again in '77 it's "Meet Me In St. Louis" time. Be sure to plan to join with those in the swim of things and those from afar who will be gathering in St. Louis for our annual Springtime Event which this year will be held the weekend of April 22nd Through the 24th. As usual, we will have a Dinner/Dance on Saturday evening and an auction on Sunday. The Hospitality Room will be available after hours for socializing or whatever.

This year it will be our pleasure to have as our featured speaker, the world famous DR. HERBERT R. AXELROD, President and Executive Editor of Tropical Fish Hobbyist magazine. He is constantly collecting and researching fish in all parts of the world. Many of the tropical fish that we maintain in our home aquariums have been named after him.

The Missouri Illinois Betta Breeders will again share our show area this year. They will be hosting their own I.B.C. sanctioned Betta show. For complete details see the M.I.B.B. rules.

HOTEL ARRANGEMENTS

We ask that you make your reservations directly with the Holiday Inn. They have agreed to set aside a block of rooms for our group. Please tell them you are attending our Workshop and Show, so that your reservation will be in the group. We are attaching a reservation card for your convenience. The rates are - Single \$19.00 - Double \$22.00 plus tax. Please let us know ahead of time if babysitters will be required.

GALA DINNER DANCE

We will have the pleasure again this year to dance to the music of The Velvetones. We will have a cash bar before and after dinner. A delicious meal is being planned.

PLEASE JOIN US FOR A HOBBY FILLED WEEKEND

SHOW CLASSES

✓ Class 1 - Aquarium Beautiful - The purpose of this competition is the promotion of an appreciation of the beauty and artistic expression afforded by the aquarium.

- A. Aquariums must be rectangular, maximum size 20 gallons.
- B. Lighting is required.
- C. Any type of natural rock, gravel, or decorations may be used, however, in judging emphasis will be placed on NATURALNESS of the exhibit. It should have a natural setting as found in a pond or river.
- D. Live plants must be used in this class. No artificial plants.

Class 1 will be judged as follows:	POINTS
First impression	10
Overall artistic effect	40
Quality and condition of fish	25
Quality and condition of decorations accessories, including plants	<u>25</u>
	100

✓ Class 2 - Saltwater Aquarium Beautiful - The purpose of this competition is the promotion of an appreciation of the beauty and artistic expression afforded by the saltwater aquarium.

- A. Aquariums must be rectangular, maximum size 55 gallons. For 29 gallon and larger the exhibitor must supply his own stand.
- B. Lighting is required.
- C. Any type natural rock, gravel, sand or natural decorations may be used, however, in judging emphasis will be placed on the NATURALNESS of the exhibit. It should have a natural setting, as found in the ocean or sea. A mixture of oceans is acceptable.
- D. Any single fish in this exhibit may be entered in Class 10 - Saltwater Single Fish.

Class 2 will be judged the same as Class 1.

✓ Class 3 - Novelty - The purpose of this competition is to seek entries with a theme, decorations and stocking according to the theme, unusual arrangement or construction, etc. Either freshwater or saltwater containers may be used.

- A. Any exhibit larger than 30" wide by 36" long or holding 29 gallons or more must be cleared by the Show Chairman.
- B. Exhibitor must supply all necessary material.

Class 3 will be judged as follows:	POINTS
Originality of theme	40
Set-up	35
Fish to fit theme	<u>25</u>
	100

✓
Class 4 - Male Guppy - Grey bodied - also including Gold, Albino and Snakeskins - all colors combined.

4
Class 5 - Male Guppy - 1/2 and 3/4 Black bodied - all colors combined. *1/2 black*

X
Class 6 - Female Guppy

X
Class 7 - Two Matched Male Guppies

The following applies to Classes 4, 5, 6 & 7.

- A. Entry must be shown in 1/2 gallon drum bowl.
- B. Decorations are limited to solid color background (optional) and a single floating plant, if desired (no lights or gravel).
- C. Females may be included in male classes at the discretion of the exhibitor but will not be judged.

Classes 4, 5, 6 & 7 will be judged by IFGA point standards.

X
Class 8 - Egglayers Family Breeders

- A. Parents and at least eight (8) half-grown or less fry per tank. Fry must have been bred and raised by the exhibitor.
- B. General Show Rules and Regulations apply.

Class 8 will be judged as follows:

	POINTS
Difficulty of breeding and raising	30
Size	10
Color and quality	30
Matching of fish	20
Department and condition	10
	<u>100</u>

✓
Class 9 - Egglayers and Livebearer Breeders

- A. Eight (8) or more fish per tank. Entry will consist of at least four (4) females where sex is easily distinguishable by a novice breeder. Fish must have been bred and raised by the exhibitor.
- B. General Show Rules and Regulations apply.

Class 9 will be judged as follows:

	POINTS
Difficulty of breeding and raising	20
Size	10
Color and quality	30
Matching of fish	25
Department and condition	15
	<u>100</u>

Class 10 - Saltwater Single Fish

- A. General Show Rules and Regulations apply.
- B. Any single fish which is in a tank entered in Class 2 may be entered in this class.

Class 10 will be judged as follows:	POINTS
Health, deportment and general condition	25
Color	20
Markings	15
Fin formation	30
Size	<u>10</u>
	100

THE FOLLOWING CLASSES WILL BE JUDGED BY THE GENERAL CLASS JUDGING AS FOLLOWS:

	POINTS
Health, deportment and general condition	25
Color	15
Markings	15
Fin formation	30
Size	<u>15</u>
	100

- ✓ Class 11 - Livebearers (excluding Guppies) - Normal and Fancy finnage
- ✓ Class 12 - Cichlids (pairs only)
- ✓ Class 13 - Anabantids (excluding Betta Splendens)(pairs only)
- ✓ Class 14 - Tetras, Rasboras and Barbs (pairs only)
- ✓ Class 15 - Angels (pairs only)
- ✓ Class 16 - Killifish (pairs only)
- ✓ Class 17 - Catfish, Loaches and Sharks - (pairs only)
- ✓ Class 18 - Freshwater Single Fish (excluding Bettas and Guppies)
- ✓ Class 19 - Goldfish (single fish)

JUDGING

The judges have the option not to assign points to any entry which, in their opinion, is not in competition for an award.

GENERAL RULES AND REGULATIONS

- A. These rules apply to all classes except as noted.

- B. Exhibitor shall provide his own tanks or bowls and other accessories he may deem necessary, including valves, air hoses, air stones and filters used.
- C.
 1. Tanks shall be two gallons and up. Any tank 29 gallons and larger shall require special permission and exhibitor must provide own stand.
 2. Bowls shall be 1/2 gallon drum bowls and up.
- D. Each tank or bowl will contain one entry (male and female, where sex is readily distinguishable and where applicable). Exception: Class 2 where a single fish may be entered in Class 10.
- E. Any type lighting, including Grow-Lux, is acceptable in all classes. Any lights you wish left on all night should be marked on the tank.
- F. Filtration is optional in all tanks and bowls. No filtration in Guppies. No box or corner filters in any tank or bowl (show committee recommends the use of filtration or aeration in all tanks and bowls).
- G. Tanks or bowls not presentable, or leaking tanks, must be removed immediately or corrected by the exhibitor. Water must be free of sediment and cloudiness. Bottom must be free of sediment. Rejection at the discretion of the Show Chairman.
- H. All tanks and bowls, excluding Guppies, must be adequately covered. Aluminum foil and plastic wraps prohibited. Nylon net is acceptable.
- I. A background and end covering on each tank and a background on each drum bowl must be used (except Guppies). Example: mirrors, paints, decals, etc.
- J. Heaters may be used if desired. An electrical outlet will be provided within 3 feet of each tank and bowl (except Guppies).
- K. Air Supply will be furnished by M.A.S.I. for all tanks and bowls (except Guppies).
- L. Each exhibitor will be responsible for the feeding of his fish.
- M. Each exhibitor will be expected to supply his own aged water; tap water will be available.
- N. Tanks or bowls may be planted where permitted. A five point bonus will be granted by the judges to any exhibit that, in their opinion, is well displayed (planted, etc). This excludes Guppies, Novelty and Aquarium Beautiful Classes.
- O. Exhibitors may supply any of the following accessories; light, clear glass dividers and connections, as he may desire. All tanks or bowl bottoms must be covered, except Guppies (see class rules).
- P. The Show Committee will make an effort to maintain room temperature of 72 degrees F or above.

- Q. Judging will commence at a time designated by the Show Chairman. All exhibitors and other persons, except Show Chairman, President and Point Tabulators will leave the exhibition area while judging is in progress, or be disqualified.
- R. The decision of the judge (s) will be final. No entries that are disqualified will be judged. The reason for disqualification will be marked on the judging form.

ENTRY REQUIREMENTS

- A. Subject to limitation of space, entry is open to anyone. An entry form with entry fee must be submitted to the Show Chairman. DEADLINE FOR RECEIPT OF ENTRY IS MONDAY, APRIL 18, 1977
Submit to: Larry Allbright
3852 Neosho
St. Louis, Missouri 63116
- B. The entry fee is \$3.00 for the first entry, \$1.00 for each additional entry.
- C. A trophy will be awarded for the best Novice Exhibit. The entrant filling out his entry form must check the box marked to be eligible for this trophy. A novice is anyone who has not won a 1st, 2nd or 3rd place in an Aquarium Society sponsored show.
- D. Set-up time will be between 3:00 P.M. and 9:00 P.M. on April 22, 1977. An additional set-up time will be allowed for late arrivals from over 50 miles by prior permission. Break-down will be 5:00 P.M. Sunday April 24, 1977.

AWARDS

Class Awards - 1st Place - Trophy, 2nd and 3rd Places - Rosettes.

Best Fish In Show - Trophy - awarded to best fish in any class excluding Classes 1, 2 & 3. Selected from First Place winners only.

✓ Best Invertebrate In Show - Trophy - awarded to best invertebrate in any tank.

Judges Award - Trophy - awarded by the judges to the individual fish, invertebrate, or entry which, in their opinion, is outstanding.

✓ Best Novice Exhibit - 1st Place Trophy award only.

AUCTION

There will be an auction at 1:30 P.M. on Sunday, April 24, 1977. Any entry in the show may be auctioned at this time (including or excluding tanks or bowls). Anyone may bring additional items to the auction. Fifty percent (50%) of the final bid will go to the society. Any entry that is to be auctioned should be marked in the box provided on the entry form. A line is also supplied for a minimum bid. The Club will make available holding tanks for out-of-town fish brought for auction by prior arrangement. Please bring your own pump, air stone, etc.

ENTRY FORM

MISSOURI AQUARIUM SOCIETY, INC. OF ST. LOUIS, MO.

17TH ANNUAL AQUARIUM SHOW AND WORKSHOP

HOLIDAY INN, NORTH

4545 North Lindbergh Boulevard At I-70

Name: _____

ADDRESS: _____

CITY, STATE & ZIP: _____

TELEPHONE: _____

If eligible for Novice Trophy check here - see definition in rules

By signing this form entrant agrees to abide by all the Show Rules, the decisions of the judges, and agrees to release the Missouri Aquarium Society, Inc. and Holiday Inn North of any liability. All entries are placed in the Show at my own risk.

<u>Class</u>	<u>Variety of Fish</u>	<u>Dimensions of Tank or Bowl</u> LxWxH	<u>Auction Yes/No</u>	<u>Minimim Bid</u>	<u>Entry Fee</u>
					\$3.00
					1.00

Workshop Registrations (workshop only) _____ at \$10.00 _____

Dinner/Dance Registrations (dinner/dance only) _____ at \$10.00 _____

Package Workshop/Dinner/Dance _____ at \$19.50 _____

Early Bird Special (Must be paid for by April 12, 1977) _____ at \$19.00 _____

TOTAL \$ _____

DEADLINE FOR ENTRIES - APRIL 18, 1977

Mail Entry Form To:
 Larry Allbright - Show Chairman
 3852 Neosho
 St. Louis, Missouri 63116
 314 - 832 - 7991

THE SIXTH ANNUAL SOUTHEASTERN

WINTER WEEKEND WORKSHOP

PATRICK J. AUSTIN, chairman
SUSAN O'MEARA AUSTIN, speakers
3745 Raleigh Millington
Memphis, Tennessee 38128

JOE MENSI, betta show chairman
CAT MENSI, betta mail-ins
3951 Pippin
Memphis, Tennessee 38128

Dear Fellow Hobbyist,

The Mid-South Aquarium Society invites you to come and meet with all your fellow fish nuts at the WINTER WEEKEND WORKSHOP '77. The Workshop will be held at the Holiday Inn Central in Memphis, Tennessee on February 18th thru 20th, 1977.

Speakers already confirmed include (in alphabetical order): Homer Arment, past member of the ACA Board of Trustees, on some of the new Rift Lake Cichlids; Gary Belton, owner of Finland Tropical Fish in West Memphis, Arkansas, on Invertebrates; Denny Brock, well known mid-west hobbyist, on Pack-Ratting in the Fish Room, Sam DeFazio, President of International Bio-Aquatics Corp., on Julies and on Collecting South American Cichlids; Midge Hill, member of the IFGA Judging Board, on Guppies and on Photography; Don Paight, former diver for the University of Miami Institute of Marine Science and the Miami Seaquarium, on Collecting Marine Fishes; Dorothy Reimer, President of CAOAC, on Livebearers; Dale Southworth, IBC Certified Judge, on Color Strains in Bettas (Dale is also our Betta Show Judge); Paul Speice, host of GUPPIES TO GROUPERS, on what goes on behind the scenes at the program; Dick Stober, Editor of NANFA's AMERICAN CURRENTS, on Natives; Kirk Taylor, past President of the Mobile Aquarium Society, on Aquatic Plants; Stu Wheeler, member of the ACALA Board of Directors, on Catfish; and Jim White, well known aquatic writer and speaker, on Goldfish. Additional seminars include Killies, more Bettas and a State of the Hobby address. And there will be a special seminar for Bulletin Editors.

Seminars will begin Friday night at 7 pm. After the seminars, there will be a get-acquainted party (BYOB) in the Hospitality Suite. Seminars will resume Saturday at 9 am and run till 5:30 pm, with a mid-day break for lunch.

Saturday evening events include a cocktail hour with cash bar, an Awards Banquet featuring Paul Speice of GUPPIES TO GROUPERS, and an old-fashioned Record Hop with a jukebox full of tunes that were popular from the late fifties to the present. (The party in the Hospitality Suite will probably pick up where it left off the night before sometime during the evening.)

Sunday morning will see the Annual Southeastern Breakfast, featuring a State of the Hobby address and the announcement of the location of next year's Workshop. This will be followed by a GIGANTIC AUCTION OF FISH AND EQUIPMENT.

Rounding out this package of fishy fun, the WWW Swap Room will be open Friday night and Saturday for you to buy, swap and sell your fish and equipment. A limited number of tanks (10's and 20's) will be available - be sure you request them on your registration form, as they are sure to go fast. NOTE: Tanks ONLY are available, you will have to provide your own air supply and/or filtration if needed.

And don't forget that in conjunction with the Workshop, there will also be an IBC National Point Show, which means a chance for those of you who keep Bettas to compete with the "big guys" in the hobby, and lots of quality stock in Sunday's Auction for those of you who would like to get started. See the enclosed Betta Show materials for more details.

For those families who would like to bring the whole clan, but not everyone is interested in fish, several other activities are being planned. A shopping trip is planned to Overton Square, a unique collection of special little shops and restaurants similar to Georgetown or Underground Atlanta. And, if enough interest is shown, trips to the Overton Park Zoo and Aquarium and the Brooks Memorial Art Gallery will also be available.

Also, a free baby-sitting service will be available Saturday from 9 am till midnight. And sitters can be had at a reasonable cost Friday night if you give us notice on your registration form.

Prices for the weekend are very reasonable. Workshop registration is \$8 in advance or \$10 at the door. The hotel has given us room rates of \$15 single, \$18 double and \$4 per extra person. Meal prices are: Saturday night Banquet - \$7.50, and Sunday morning Breakfast - \$3.25. The hotel will have an excellent buffet lunch available all three days at bargain prices.

There is no charge for the use of the Swap Room. On Auction consignments, 25% of the purchase price will go to the Mid-South Aquarium Society and 75% to the seller.

The registration table officially opens at 6 pm Friday, February 18th. We are looking forward to seeing all of you there. If you have any further questions, please call us. We will do our best to help.

Pat & Sue Austin
(901) 386-7584

Joe & Cat Mensi
(901) 386-8966

If you need registration forms they will be available at the February meeting or call Tom Hopfinger - 962-1505.



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