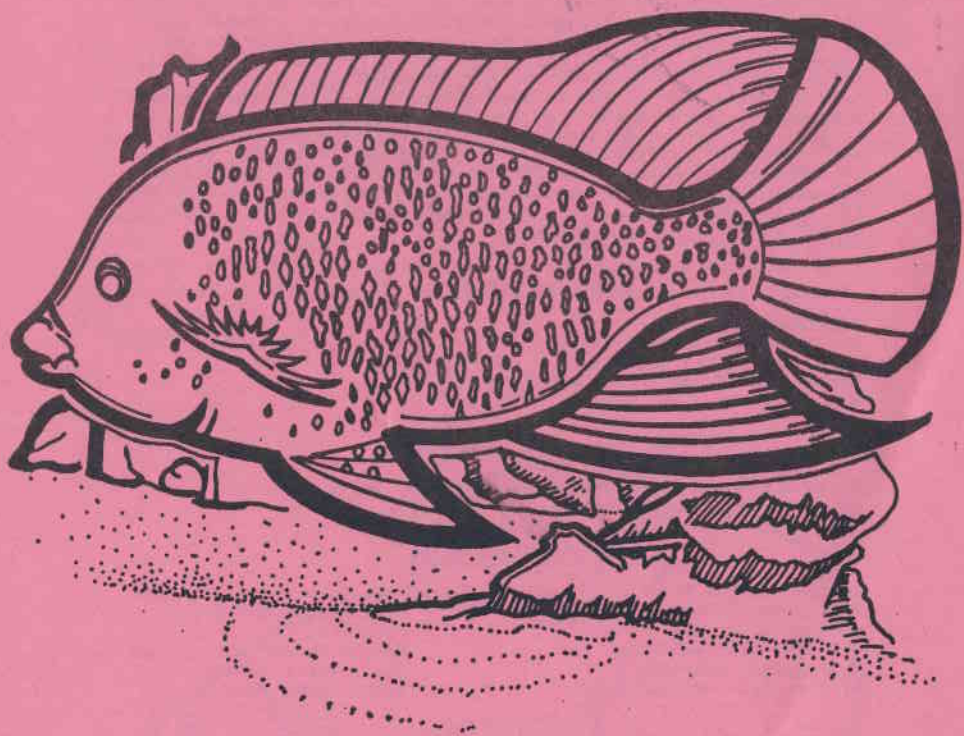


* DELTA TALE *

Sept. 1986
vol. 17 #9
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OFFICIAL PUBLICATION OF

potomac valley aquarium society



POTOMAC VALLEY AQUARIUM SOCIETY



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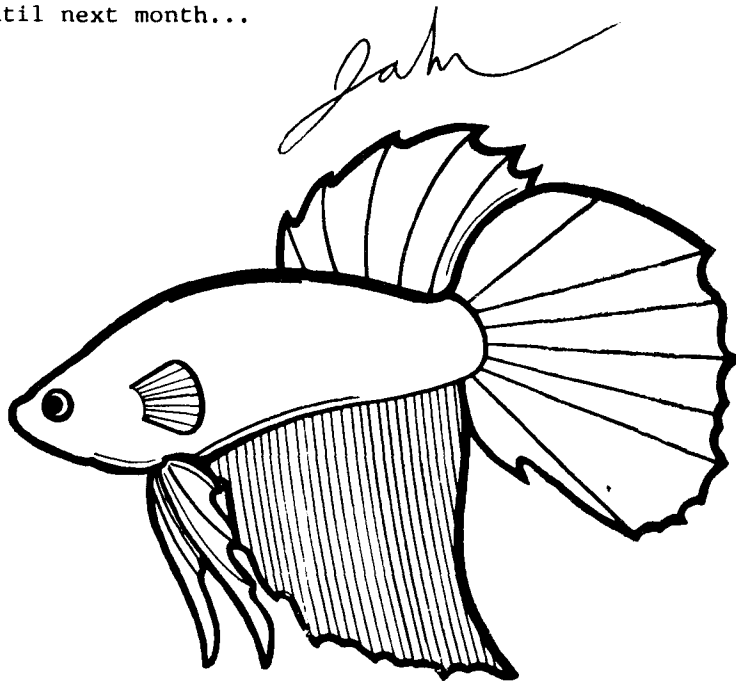
FRUM THE EDITORZ DESK

I hope all of you that went to the picnic had a good time in spite of the rain. Next year the weather should be perfect. It couldn't rain three years in a row (could it?).

Gerry Hoffman is busy planing our first fall workshop. It will be taking place the first weekend in November and besides the usual fall banquet and auction there will be a number of seminars on saturday. The list of speakers is still being worked on but there will be a good variety of top notch speakers. Hopefully there will be something to interest everybody. Further details will be announced as they become available.

It's time to start thinking about the annual PVAS elections. We will be electing a new president, vice-president, treasurer, corresponding secretary, recording secretary, and two new board members. If you are interested in runing for any of these jobs please contact the nominating committee. Gene Aldridge is the committee chairman, I don't have the names of the rest of the committee as I'm typing this. They should be announced at the sept. meeting. You can also contact me or any of the current officers to make your interest known. I would like to encourage all of you to think about running for something, especially our newer members. The people that have been running things for the past several years need a break. We need to get some new faces involved in the running of the club. You don't need any type of experience, just a willingness to do the job.

Until next month...



THE PREZ SAYS.....

The annual PVAS picnic has come and gone once again, and once again it was a wash out - literally. The Rain Gods did not cooperate with us and picked the day of our picnic, as they did last year, for the major rainfall of the season. The very minute I drove into the parking lot at Pohick Bay Regional Park, the skies opened up and did it to us. My lawn needed the rain badly so I guess I should be grateful. Between the rain and an accident on Route 95, the turnout of the membership was small. The diehards and those who cannot say "no" to a free hamburger were there. Jim Long was ready to windsurf again rain or no rain, but the lack of a suitable breeze kept him close to shore and under the shelter.

John Jessup held the Breeders Award Program Committee meeting even while the hamburgers and hot dogs were sizzling. A number of recommendations were made to get more of the membership involved. We know you guys and gals are breeding fish out there!!! (Jim, Ray let's get those forms it!)

Let me remind everyone of the MIT Press offer of 40% off for The Aquarium Encyclopedia and The Pond (normally \$37.50 and \$30.00 each). Jerry Hoffman and John Mangan will bring in copies of The Aquarium Encyclopedia to the September meeting for inspection. If there is enough interest (at least three copies combined titles) we will send off our order by 15 September.

It's not too early to mark the weekend of 1-2 November on your calendars for the first PVAS Workshop. Jerry Hoffman is the chairman for this weekend and has guaranteed us some excellent speakers. The Fall Auction will be held 2 November and we all know the great opportunity the PVAS auctions represent to pick up some good buys. Last year's Fall banquet was one of the highlights of the year and should offer the same quality this year.

September's program is not firm as of this writing, but I have a tentative agreement from Fish, Ltd to give a presentation on the new wet/dry biological marine filtration system presented in FAMA. The guys at Fish, Ltd have built their own system from scratch and hopefully they'll share their experience with us.

Until September 8 then.....

Bob

Q & A

Anyone having questions on any aspect of fishkeeping can send them to Delta Tale c/o John Mangan, 9770 Oleander Ave. Vienna VA 22180.

Q. I have a species of fish that will survive in Northern Virginia water, but supposedly needs soft, acid water to breed in. How would you suggest conditioning the water?

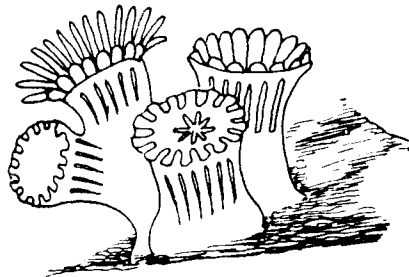
A. Adding peat moss to your filter is one of the best ways. This will soften and acidify your water. Be sure to use peat with no chemical additives. For some types of killifishes peat is placed directly into the tank and then, besides treating the water it is used for spawning. Other ways to soften the water include: commercial water softeners, there are several different kinds, consult your local pet shop to see which they carry; distilled water can be added to your tank; sphagnum moss will soften water it is growing in, the live moss needs to be emerse so grow it in shallow water with lots of light (credit for this idea goes to Gerry Hoffman, maybe he will write a short article with more details on it sometime.hint hint.) The last several methods usually don't lower the pH (except maybe the sphagnum moss?Gerry, what have you found?) so you will want to use some sodium biphosphate or something similar along with them. Consult your pet shop to see what they carry.

Q. Are there any plants found in local ponds that can be kept in a home aquarium? If so, where can they be collected?

A. I will consult the PVAS plant collecting expert and have an answer next month.

Q. The other night we planned to make a pizza, but discovered we were out of anchovies. A friend suggested frying some goodeids in a skillet with two tablespoons of salt. Isn't that too much salt?

A. Yes it is. Goodeids are perfect just like they are and don't require any additional seasoning. Cichlids on the other hand, like their owners, have very bad taste and require the addition of quite a bit of seasoning to make them palatable.



EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT BELONESOX
by Doug Sweet, MCAS

It has been five years since I set out to meet the challenge of breeding and rearing Belonesox belizanus without the use of live food. This project of mine began when I was introduced to the Belonesox through a high school friend. This friend claimed his brother kept barracudas in his aquarium. Naturally, I was skeptical about someone keeping barracudas, so I investigated. The barracudas turned out to be the pike livebearer or the Belonesox.

Belonesox, which is reputed to be a vicious carnivore by all fish books, is not commonly seen in pet shops, nor is it frequently kept. The unpopularity towards this fish could have been caused by the many aquarium books claiming that the Belonesox can only be raised successfully and bred by feeding them multitudes of live fish. Naturally, with the price of feeder guppies and goldfish today, it would be highly uneconomical to raise this fish considering an adult pregnant female Belonesox can devour anywhere from six to a dozen feeder guppies a day. Hence, when I purchased my first pair of Belonesox, I set out to discover a more economical way to breed and rear these fascinating livebearers. I am pleased to announce that, after four successive generations, and after raising hundreds of Belonesox fry, my feeding techniques can definitely be termed successful.

The first problem I encountered with keeping Belonesox was what to feed the adults if they were not going to be fed live foods. I decided to feed them frozen strips of fish meat. However, to get a Belonesox to take such food, one must first train them to attack the non-living meat. This is done by the following method: first, frozen fish is sliced into long slender strips that resemble small minnows. Next, the fish meat is allowed to thaw and then a pair of tweezers is used to grasp the one end of the strip. Finally, the strip is wiggled just under the surface of the water to resemble a moving fish and a hungry Belonesox will quickly strike at and devour such a piece of meat. Using this technique, Belonesox will eventually learn to take meat just dropped in the water, and will also learn to devour meat lying at the bottom of the tank. Presently, all of my adult breeding Belonesox are fed on frozen perch, bluegill, bass, bullhead, or other native fish using the above technique.

Feeding the pike livebearer on a diet of chopped fish meat does present a number of problems. First of all, care must be taken to remove any sharp bones from the meat prior to feeding. Also the meat should be sliced to sizes small enough to be easily swallowed by the fish. If either procedure is not done, there is a chance that the meat will become lodged in the Belonesox's throat, causing extreme trauma or even death.

Another problem of feeding chopped fish meat is a nutritional one. The sole feeding of white fish meat for extended periods of time will cause Belonesox to undergo vitamin deficiencies. Symptoms of such deficiencies, which I have encountered, include wasting away, pop-eyes, and deformed or crooked backs. At least the pop-eyed condition can be cured, and all the other problems prevented, by administering vitamin supplements.

Vitamin supplements can be administered in variety of ways. First of all, chopped chicken liver can be fed occasionally as a substitute for the fish

meat. Another technique is to feed the Belonesox the viscera from the fish the meat originates from. Yet another technique is to saturate the strips of fish meat with water-soluble bird vitamins, and then feed these strips to the Belonesox. Finally, an expensive way to supplement the Belonesox's diet is to occasionally feed live fish which will supply the needed vitamins.

By feeding a pair of Belonesox with an adequate amount of frozen fish meat and an occasional vitamin supplement, one should be rewarded with large batches of fry with great regularity. Belonesox breeds in a typical livebearer fashion, with the male circling around and displaying to the female by quivering his fins. This quivering is much like a male swordtail's or guppy's quivering but is comical because it seems to be in slow motion compared to other livebearers' displays.

The female Belonesox gives birth about every four to five weeks at temperatures in the high 70's to low 80's. In contrast to Randy Stier's report in the July 1980 Tropiquarium, I have never seen a baby Belonesox born head first. All of the births I have witnessed have been tail first, and occasionally two baby Belonesox are born simultaneously. The batches of fry are usually large (between 30 and 60 fry) and will be devoured by the other adults in the tank unless the pregnant female is isolated, and many bushy plants are provided for refuge for the fry. Frequently the female Belonesox will also give birth to a number of premature undeveloped fry besides the normal ones. These can simply be destroyed since they do not survive very long anyway.

Once the baby Belonesox are born, the question arises, "What am I going to feed them?" Well, after years of raising Belonesox, I have found that this is the most diverse aspect of Belonesox culture. I know of four methods of feeding pike livebearer fry and, by combining these methods, a number of different raising techniques can be dreamt up. First of all, the best and unfortunately the most expensive way of feeding baby Belonesox is with live foods. On a diet of live glassworms and baby livebearers, the baby pike livebearers will grow very rapidly and will be a couple of inches long before a month or two.

Baby Belonesox can be fed on inexpensive non-living foods, however. They can be fed similarly to the parents by training them to take finely chopped frozen fish meat and chicken liver. This feeding technique has the drawback of requiring much labor to finely slice up the fish meat to small enough sizes.

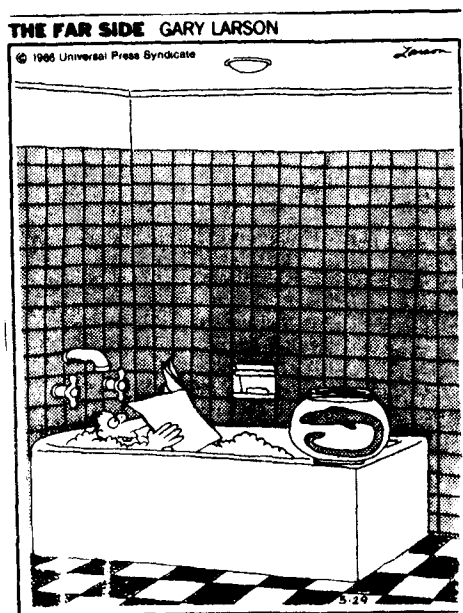
A more labor-saving food for the little fry is the old aquarist's favorite, brine shrimp. The frozen shrimps can be dropped in the current of the filter, which causes them to thaw and swirl around in the water. The little pike livebearers soon learn to strike at these and will eventually eat lumps of shrimp just lying on the bottom of the aquarium. In fact, one of my friends invented an automatic baby Belonesox feeder which uses an airlift tube and sucks up brine shrimp from the bottom of the tank, spews it out at the water's surface for the fry to eat, and any uneaten food is resucked up and expelled once again. With this device, no shrimp are left on the bottom to go uneaten. One drawback with feeding brine shrimp is that the young fish outgrow it when they are only an inch or two long. Then the juvenile fish will have to be converted over to eating frozen or live fish.

Finally, young Belonesox can be trained to take dry foods, but, from my experience, the growth of the fish fed this way is very slow. Hence, I do not recommend dry flake foods for pike livebearers.

If baby pike livebearers are fed well using the methods I have discussed, they will grow and mature very fast. The males mature earlier than the females, but by six months of age all fish should be mature and the females should begin to give birth.

The water requirements for Belonesox are noth demanding, either. As long as extremes in pH are avoided and an occasional water change is performed, the fish should do fine. However, if the fish lose their appetite, some salt (marine or kosher) can be added (since they are slightly brackish fish) for them to regain their appetite. So, by following the techniques I have outlined, anyone should be able to raise Belonesox belizanus inexpensively and easily.

(reprinted from Tropiquarium, Motor City Aquarium Society)



Places never to set your electric eel.

BOWL SHOW REPORT FOR

August

CICHLIDS

New World Dwarf

1st ????? #1-D.Mann
2nd ????? #2-D.Mann
3rd

Riftlake, Non-Mbuna

1st Kribensis-D. Sun
2nd Kribensis-R. Huges
3rd Kribensis-D. Sun

Open

1st ?????- D. Sun
2nd
3rd

EGGLAYERS/LIVEBEARERS

Killifish

1st A. Perori-J.Stieringer
2nd A. Spoorinborgi-J. Stieringer
3rd N. Guntheri-J. Stieringer
(A Fine Looking Fish)

Catfish, Non-Corydoras

1st Syn. Angelicus- D. Sun
2nd
3rd

Open

1st Rainbow Goodied-J. Mangan
2nd Greensword-J. Lamberth
3rd Pantail Goldfish-J. Lamberth

Judges Choice A. Persori
MONTH QUARTER ANNUAL

D. Sun	14	17	104
J. Bennet	0	16	42
D. Mann	10	16	23
J. Long	0	0	22
C. Edlar	0	0	17
J. Lamberth	1	1	6
R. Huges	4	4	4
J. Kooken	0	0	4

Judge-Bob Roser

MONTH QUARTER ANNUAL

J. Bennet	0	12	91
B. Pallansch	0	9	47
J. Lamberth	7	15	39
C. Edlar	0	0	21
J. Stieringer	12	12	19
D. Mann	3	13	13
D. Sun	7	7	11
J. Mangan	6	7	9
J. Long	0	0	6
S. Ptaszek	0	0	5
J. Kooken	0	0	4
R. Huges	2	2	2
B. Roser	0	0	2
J. Carter	1	1	1

Jon not Jimmy

NEXT MONTH

ANGELFISH/DISCUS	LIVEBEARERS, NON-GUPPY
NON-RIFTLAKE AFRICAN	SHARKS AND LOACHES
OPEN	OPEN

HOW TO BREED BETTAS

by Steve Saunders
Willowdale Aquarium Society and
the Toronto Betta Buffs

Recently, many hobbyists have been asking me how to breed bettas. This is not an easy question, because given the opportunity the darn little critters will only breed if they want too! But I can tell you how you can encourage them to breed. If you give them what they want and need to breed, they may oblige.

THE FISH

First of all, we should consider the fish themselves. You will be most successful if you use a young pair. Older fish are frequently belligerent, for instance the best red strains around rather fight than spawn once they reach full size. Sometimes older fish are just never excited enough to spawn. The best way to get good young stock is to visit a local breeder.

The fish must be fed and cared for well. Aquarists call this process "conditioning". Not just flake food. Bettas are picky eaters and really appreciate live or frozen brine shrimp and live black or tubifex worms. These you can purchase at your local pet store. Beef heart scrapings or paste food can also help. If fed a good diet and given weekly water changes your fish should achieve a state of good health and ripeness. They will want to spawn.

THE SPAWNING TANK

For a successful spawning and raising of bettas, your best bet is a 10 gallon tank. A larger tank can be used, but the fish frequently get lost in it. In a smaller tank, the male can be too rough on the female resulting in no spawn and a very sorry looking lady. I would suggest that you half fill the tank with clean water and let it age a day or two. No gravel is needed, its better without.

A temperature of 80 degrees F is generally considered the best temperature for spawning bettas. This can be achieved with an aquarium heater if the ambient temperature is too low. Keep track of the temperature with a thermometer. A cover over top of the tank sometimes seems to help. They also spawn more readily if over the tank lighting is provided. Other water conditions are not critical provided they are not extreme. Some betta hobbyist report that very hard well water reduces fertility. Toronto's tap water, after a few hours aging is quite fine.

Generally, I place a large mouth jar inside the tank filled with water. The female is placed here so that the male, in the tank, can see her but not hurt her. Usually after expressing his amorous intentions, the sight of the female will stimulate his interest in building a bubble nest. I usually place a mess of plants in the tank so that the female has a place to retreat and hide from the male until they are ready to spawn. Other hiding places will also serve this purpose. Art Halpert, a local bettaophile in WAS/TBB has had much success using a small

upright flower pot. Don't turn it on its side! Far too many bettas have died trying to swim through the hole at the bottom of a flower pot but getting stuck. Betta males think that a styrofoam coffee cup, cut in half and floating on the surface of the water is an ideal place to build a bubble nest. The cup also aids in keeping the nest from falling apart during the sometimes passionate and rough spawning act.

You should also include a sponge filter in your spawning tank. Do not turn it on until the betta fry are free swimming. Note that young bettas are often trapped inside a box filter if used, thus sponge filters are your best choice.

Bettaphiles have often reported that a change in atmospheric barometric pressure stimulate their fish to begin bubble nest building and spawning. I have often had five or six pairs set up to spawn for a week or more, with no success until a storm passes over, and then they all spawn simultaneously!

SPAWNING

When male has built a bubble nest of about one and a half inches in diameter it is time to introduce the female. Sometimes the male is reluctant to do much nest construction. You can then try letting the female out early. After a how do you do and a squabble he may set too and make a nest.

The males can be quite aggressive during spawning. They will likely rip the females fins and knock out a few scales. The females frequently get a few shots in too. Don't be alarmed. Your spawning pair will never be show fish after spawning but they will mend and spawn again! Provided the female is swimming well and is able to hide from the male's aggression when she needs to everything should work out fine.

The spawning is truly a sight to behold. Even after spawning bettas over one hundred spawns still love to watch. After some initial flirting, chasing and fighting, the female will quickly swim to the male under the nest, with her body on an angle with the surface, head down. She will nibble at the middle of his side, and he will respond by curling around her, and she around him, in a typical anabantoid embrace. She tips upside down, with their vents in close proximity. They sink. The first few times will be "dry runs", no eggs will be expelled. But in later embraces the female expels the eggs while upside-down. The eggs are momentarily trapped in the cup of her ventral fins and become fertilized. The pair hold their position while falling towards the bottom as if in a trance. The male wakes up from the spawning trance first. He will pick up the falling eggs and spit them into the nest. The female wakes up seconds later. Sometimes she will assist.

This ritual is enacted again and again until the female no longer releases anymore eggs. Once this occurs the male chases her away and defends the nest against any intruder he can ward OFF.

INCUBATION

The eggs incubate for 36 to 48 hours at 80 degrees F. During this time the male tends to the nest and picks up and returns any eggs that he notices falling. His actions seem to be necessary. The eggs in untended nests fall to the bottom and go bad.

When they first hatch, the fry (young fish) hang in a vertical position from the nest. They possess an yolk sack which they must absorb before they begin to feed. This takes about two days at 80 degrees F. Again, the male tends to the nest and the fry and tries to keep all the fry together in the nest. Fry that fall to the bottom unnoticed usually die.

FEEDING

Once the fry start to swim about purposefully in a horizontal position then they will begin to feed. Their first food will be very small. They'll eat the microscopic life in the water. This should be supplemented with infusoria, green water, commercial baby egglayer food of hard boiled egg yolk: squeezed through a cloth. Be careful not to add too much or you pollute the water. At this stage the male should be removed. He will no longer tend the fry and may soon eat them. I always add some small snails to eat uneaten food. It is also recommended that you add some Aquarisol or similar product to help prevent disease. I tend to use acriflavine as Aquarisol and other copper based medications will kill the snails. Young bettas are very prone to velvet.

On the first day of free swimming you should be sure you have your brine shrimp hatchery set up. The fry will be ready to eat newly hatched brine shrimp on the second or third day. Brine shrimp is the secret to raising all varieties of tropical fish. Once you have your fry eating brine shrimp you'll be well on your way to raising a generation of bettas.

Reprinted from "Fish Finatics" January 1985, The Publication of the Willowdale Aquarium Society and Toronto Betta Buffs, Toronto, Ontario, Canada.

(From the ATF FORUM / FISHNET Computer Bulletin Board Service)

THE MIRROR

REPRINTS

"Not All Cichlids Are Desirable" by George White, and "Some Comments On The Preceding Article" by John Mangan, were reprinted in the May/June 1986 issue of Aqua News, publication of the Minnesota Aquarium Society.

REVIEWS

"Cihlasoma oblongum" by Garland Neese, was reviewed in the may/june 1986 issue of Carolina Aquarist, publication of the Raleigh Aquarium Society.

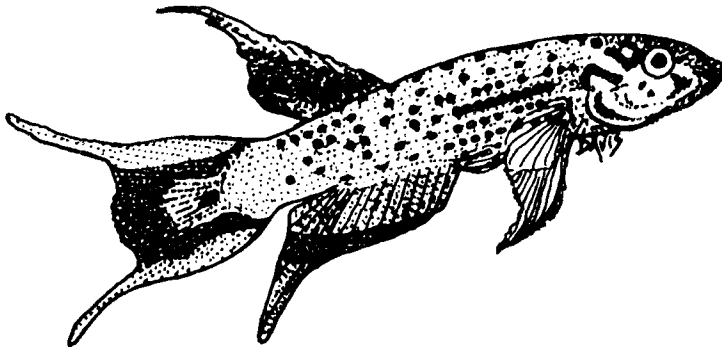
"Fixing and Improving Weak Air Pumps" by Mark Westling, was reviewed in the may 1986 issue of Tropiquarium, publication of the Motor City Aquarium Society.

Mark's article was also reviewed in the may 1986 issue of FWCA Bulletin, publication of the Fort Wayne Cichlid Assoc.

"Not all Cichlids are Desirable" by George White, was reviewed in the may 1986 issue of FWCA Bulletin.

"Packing Fish for an Auction" by John Mangan, was reviewed in the may 1986 issue of Tropic Tank Talk, publication of the Greater Detroit Aq. Soc.

"Outsmarting Cichlids" by George White, was reviewed in the Aug. 1986 issue of FWCA Bulletin.



ed. note- thanks to Chuck Davis for the use of the above drawing. J.M.

HEMIGRAMMUS CAUDOVITTATUS: BUENOS AIRES TETRA

A HEARTY TETRA

by Vickie L. Coy, SWMAS

In the reading material available to me, it is said that the meaning of Hemigrammus is half-line. Caudovittatus means with tail stripe through the middle. We hobbyists know them commonly as the Buenos Aires Tetra. They originate from a semi-tropical climate in Buenos Aires, Argentina, in South America. They are a silver metallic fish, with a lighter lateral line. Their length, depending on your book, is stated to be 3 - 4 inches as an adult. The female is generally slightly larger and fuller in outline than the male. Buenos Aires have a diamond-shaped black spot at their caudal base. The other difference shown about the sexes is that the male's fins and tail are redder in color, which makes the female's look more yellow.

Although they are a fairly peaceful fish, they do require a decent size tank, such as 20 gallons or more. It is best not to house them with fish who hold beautiful finnage, such as angelfish. They are known to be fin nippers. They are hardy eaters, taking most all foods I have dumped in the tank. Keep these tetras well fed. Cichlids are not the only fish with ravenous appetites. This also narrows your chances of nipping. Mine have never been guilty of this act.

The tank my Buenos Aires Tetras were housed in was a 20 gallon high tank. This tank is called my oddball tank. Any fish I can't find a tank for, don't know what I want to do with, widows and widowers over deceased fishes, etc. Blue Gularis male, one Nudicep, pair of Cherry Barbs, female Blue Panchax, five Pearl Danios, pair of Badis Badis, Kuhli Loach, and a Plecostomus. Not a normal tank, and most likely considered a no-no by hobbyists, but they got along well with each other. This tank had an undergravel filter, 1/3 water change once a week, 78 degrees, and fed twice a day, alternating flake food and frozen brine shrimp.

Books suggest separating the sexes before placing them together in your spawning tank. My fish didn't seem to require this, happily. Females are more aggressive, and I agree, but luckily they didn't ax my male during the spawning, like the written word warns. My Buenos Aires were about 3 inches long, and I felt a ten gallon tank would suit them for a spawning tank. An undergravel filter was used in this tank. The tank temperature was 80 degrees when one male and three females were placed in the tank. Plants and a black killie spawning mop were placed in the tank with them. Buenos Aires are egg scatterers.

The next morning tiny adhesive eggs were found scattered all over the mop. I didn't have any success raising them in a 10 gallon with an undergravel filter before, so I placed the mop in a 5 gallon tank. This tank was 2/3 full with Portage City tap water, and had a sponge filter in it. Aquatronics Declor-It was also added at this time.

Hatching time is considered to be 72 hours for 70 - 76 degree tanks. My Buenos Aires hatched in one day, due to the fish room being so warm. The fry tank was 80 - 82 degrees. Immediately upon hatching, I began feeding Interpet Liquifry #1 for egg layers, about 2 - 3 times a day. After 5 days of free-swimming they were ready for Sanders Baby Brine Shrimp. They were fed twice a day on this.

At three weeks, they were about 1/4 inch long. They were brown-silverish miniatures of their parents, with the black spot at the caudal base in view. No color in their fins and tail at this point though. They also ate flake food now, and were getting too big for their tank. Therefore, they were moved to a 30 gallon tank to help further their growth. Moving them to a larger tank and 1/4 water changes brought out a light orange coloration in their fins and tails at four weeks.

This spawn of Buenos Aires are 1 1/2 inches long at 60 days. That's about 1/2 the size of the adults. They are extremely hardy eaters, and are not particular about what they get to eat. Throw the food in and stand back for the explosion of fish feeding.

If you desire a pleasant and hearty tetra that's easy to spawn, I recommend these fish. Their fry are easy to raise, and I counted 178 tiny ones when I was bagging them. The fry are as hearty as their parents, making it possible to have a large spawn of the Buenos Aires Tetra.

References:

Exotic Aquarium Fishes 19th edition revised: Dr. William T. Innes, Metaframe Corp., co.1966, page 156

Exotic Tropical Fishes: Axelrod, Vorderwinkler, Emmens, Sculthorpe, Pronek, Burgess, T.F.H. Publications, co.1977, page F-319.00

Exotic Tropical Fishes Expanded Edition: A. Axelrod, Emmens, Burgess, Pronek, G. Axelrod, T.F.H. Publications, co.1980, page 732

(reprinted from Swam, Southwest Michigan Aquarium Society)

Trading Post

Ads for the Trading Post should be sent to Delta Tale c/o John Mangan, 9770 Oleander Ave., Vienna, VA 22180 by the 20th of the month prior to publication. Ads will be run in one issue only, unless the advertiser requests a longer run.

For Sale: fry or subadults of the following cichlid species:
Haplochromis venustus, Pseudotropheus macrothalamus (Chilumba),
Ps. zebra (red), mottled Labeotropheus trewavasae, \$3 each
or 4 for \$10; Haplochromis burtoni \$1, Two Lamprologus casegera
\$10. I will also trade fish for plants or other cichlids
*(no goodeids!!!) George White, 524-3785.

*ed. note- this is because goodeids are worth so much more than cichlids there is no way to possibly make a fair trade. J.M.

Want: Allotoca spp., Zoogoneticus spp., Allodontichthys spp.,
Female Iriatherina weneri (red tail strain), Female knight
goby, aka hi-fin goby (Stigmatogobius salanundio).

For Sale: backissue aquarium magazines. Send SASE for catalog.
John Mangan, 9770 Oleander Ave., Vienna, VA 22180.

For Sale:

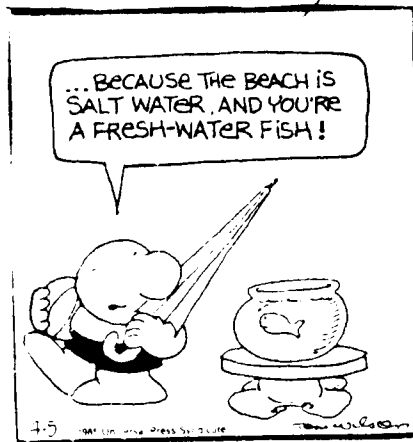
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TELEPHONE H _____ W _____

OCCUPATION _____

Where did you hear about PVAS/get this application? _____

Number of tanks _____ Time in hobby _____

What can this club do for you ? _____

What do you want to do for the club ? _____

Membership dues for the Potomac Valley Aquarium Society are:

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01780
PENN. FISH CULTURISTS ASSOC
1823 DIDLEY STREET
PHILADELPHIA, PA 19145

The Potomac Valley Aquarium Society will meet on the following dates in 1986:

Aug. 11	Nov. 10
Sept. 8	Dec. 8
Oct. 20	please notice this is a change from the normal date

Meetings are held at the John C. Wood Facility, Rt. 237 (Old Lee Hgwy)
Fairfax City, VA. Doors open at 7:30 PM, meetings start at 8:00 PM.
Everyone is welcome.