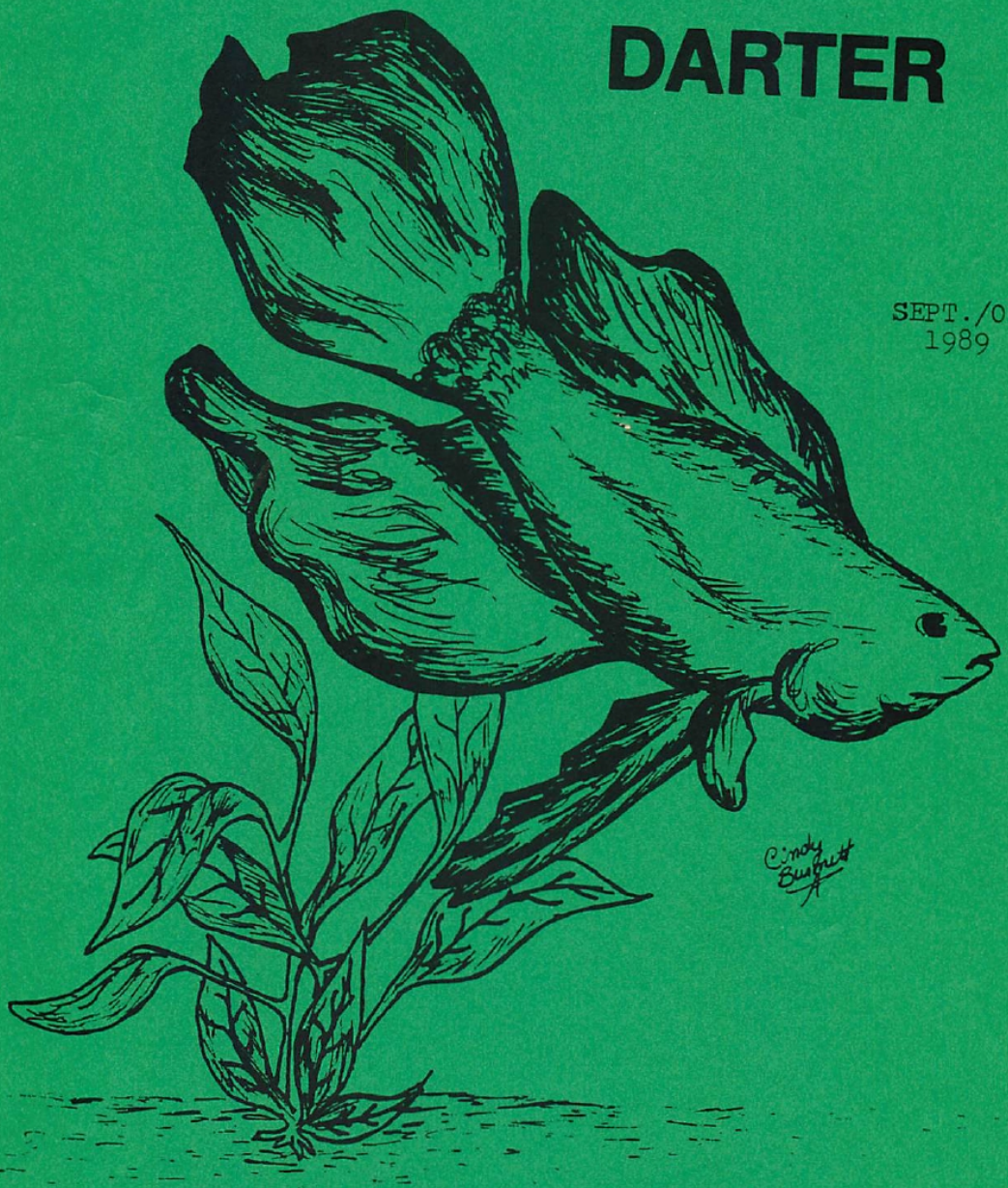
THE DARTER



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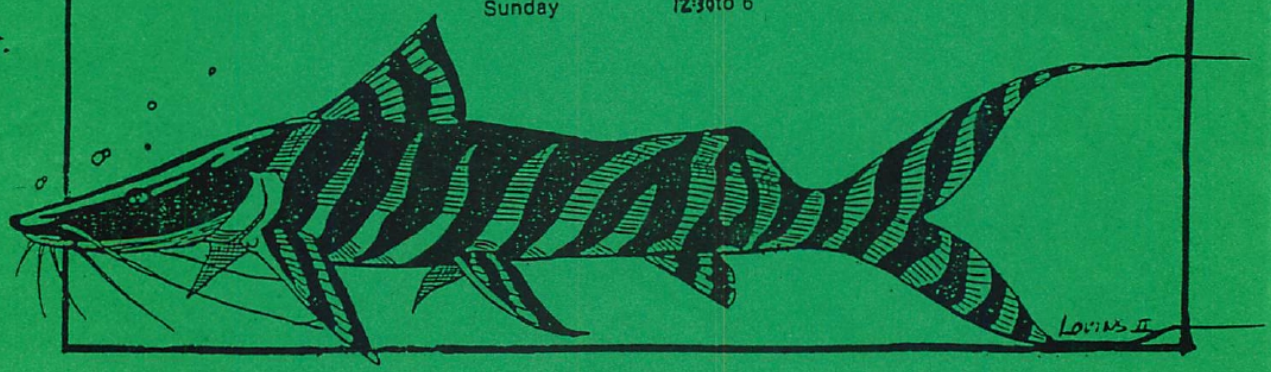

SPAWNINGS VERIFIED IN JULY & AUGUST, 1989

PARTICIPANT SCIENTIFIC NAME	COMMON NAME		POINT VALUE	GRAND TOTAL
Charlie Zesch				
Poecilia reticulata	Bronze Guppy	**	0	
Pterophyllum scalare	Black Angelfish	**	0	85

* First MASI spawning

** No points assigned - Species already spawned - Color Variety

*** Points will be awarded upon submission of a written article or an oral presentation detailing the participant's experience in spawning this species.

BAP AWARDS EARNED

LEVEL/SPECIALTY	PARTICIPANT	DATE
Advanced Breeder:		
	Pat Floyd	07/89
	Noel Roberts	07/89
	Curtis Skouby	07/89
General Breeder:		
	Charles Hoppe	07/89
Genus		
Nothobranchius	Ralph Wilhelm	07/89
Species		
Poecilia sphenops	Pat Tosie	08/89

THANK YOU THANK YOU THANK YOU

The turn-out to collate the July/August issue of THE DARTER was fantastic. The issue was assembled quickly, and there was still plenty of help for Ralph to organize some auction needs. Thanks to:

Bob Huels	Ralph Wilhelm	Jim Thale
Bob Reich	Charles Lenau	Chris Lenau
Kitty Mueller	Tina Mueller	Al Anderson

The November/December issue of THE DARTER will be collated on October 30, 1989. Call Jim and Kitty Mueller for directions, and to make sure that everything is on schedule.

Dan Tels
sept/oct 89

CRACKING THE WHIP

Jim Thale
Missouri Aquarium Society, Inc.

I have, for a great many years, been extremely fascinated by some of the more unusually shaped catfish. The Whiptails, of course, fall into this category. The particular ones that I have are, I believe, Farlowella gracilis. My belief is based on the information contained in Sterba's FRESHWATER FISHES OF THE WORLD. This fish was first described by Regan in 1904, and is found in southern Columbia Rio Caqueta' and the Cauca Valley.

I housed my "Whips" in a 100-gallon aquarium, along with some South American cichlids for about a year. During this time, the fish spawned about twenty times. Each spawn was laid on an airline tube to a box or sponge filter. In eight to ten days, the eggs appeared to be fully developed and about to hatch. However, I never saw any fry in the tank. The next logical step was to remove the airline tube holding the eggs, and hatching them artificially. In six attempts, I managed to get only one fry past ninety days (He's about a year old now). This was quite frustrating to say the least.

Early this spring, fate intervened - I sold the 100-gallon tank. This meant that I needed to move the fish. Since I had an empty thirty-gallon tank, it seemed like a good home for my "Whips."

On March 12, they spawned, laying their eggs on the glass instead of the airline tube. I left the eggs and the fish alone - the male was taking very good care of them. Much to my surprise, on the morning of March 17, I found a second batch of eggs about five inches from the first batch. Both batches were being tended by the same male. I counted the eggs in each batch. There were forty-three in one and twenty-nine in the other. Since I had counted the forty-three eggs in the batch of eggs I found on the twelfth, I was positive that the male was not simply moving them around.

The first batch hatched on March 22 and the second batch on March 27, both ten days after the eggs were laid. The temperature in my tank was in the range of 68 to 70 degrees. The pH was about 7.0. They may hatch sooner at higher temperatures,

The diet of the "Whips" is fairly simple. I feed a lot of Spirulina, a type of algae in flake form sold under the FINTASTIC brand name. I also feed FINTASTIC's Earthworm flakes from time to time. As a special treat, whenever Carla and I have salads, I take some of the cucumber and weight it with a lead plant weight and drop it to the bottom. The adults and fry are all feed in this manner.

The male continues to spawn every month with two different females. The adults don't bother the fry, and the fry don't appear to have any interest in the eggs which are soon to become their younger brothers and sisters. I find this to be convenient, because one need not tie up a lot of space to keep the "Whips."

"ASSALT" IN A 10-GALLON

Bob Reich
Missouri Aquarium Society, Inc.

The story you are about to read is true. No names will be given, since I do not name my fish.

It all started one afternoon about three years ago. Well, maybe a little longer than that, let's say three years and two months. I was in my basement at.... I won't give out my address to protect myself from cleaning the place up for company.

I was tired of all the negative responses that I was receiving on setting up a ten-gallon salt tank. Not big enough was one. Nitrites would never stabilize, same with pH, on and on it went. I heard enough.

Acting as if I took the advise, I proceeded to take a ten-gallon tank that over in the corner and started the heinous crime. After rinsing out months of dust and cobwebs, I set the tank on top of a stand that I have for Lancaster, my iguana (Remember, I'm not naming fish.). After applying enough synthetic sea salt to provide a specific gravity of about 1.023 (roughly four cups of salt), I filled the tank one-half of the way with water, and let it sit for two days (The salt had dissolved by that time.).

Through sources I will not name, I had received about fifteen pounds of crushed coral. I rinsed out enough to fill about one and one-half inches from the bottom. (I had been told to use at least two inches, but remember, a ten-gallon salt is taboo, so if your going to "break the law," do it right. I went with one & one-half inches.)

The murky water was clear by the next evening. I introduced four mollies that were lying around in one of my thirty-gallon tanks. Yes, I know, kidnapping is now in my resume'. But hey, they didn't seem to mind, so I did it! Besides, it's best to start out with cheap fish, and since damsels run anywhere from $2.99 and up..... Well, enough said.

Somewhere between that day and a week, or was it a week and a half later, I tested the ammonia. It was getting a dark green (0.8 on the "ammo" scale.). Nitrates - zero, nitrites even less. I don't remember if I checked the pH.

I continued this for another two weeks with really no change in the ammonia, but nitrates were up between 70 and 100, and it looked like the nitrites were going up, but it could have just been my eyes.

After another week and a half, I began to notice the ammonia falling. Nitrites were on the rise (around 0.4). By the way, the four mollies are still doing fine.

I started checking the nitrites every other day for another week. As expected they kept rising. In fact, by the end of the week (week #6), the nitrites had peaked and dropped down to 0.2 on the "N" scale. Time for a new fish.....

I bought a Three-Spot Damsel the next day. After acclimating him (or her), properly, I let the damsel out of the bag. Everything was fine. The damsel was getting along with the mollies, and everybody was getting along with the tank. Happy, I went to sleep.

The next morning, I awoke to find one dead molly and a dead damsel. After checking the nitrites, and finding that they were the same as the day before. I came to the conclusion that someone, during the night, had created a stink, and the casualties resulted.

I waited a couple of days.... I wanted to get a Percula Clown, but there was none to be found, and I wanted to see if the nitrites would react. They didn't. I was happy.

About this time, I started to notice algae on some of the coral (A good sign, I must say.) I began to chuckle to myself (Chuckle, chuckle... What's so hard about this size of salt? .... chuckle, chuckle). A day or so later, I bought a Percula Clown.

Since then, I've not had any trouble at all.... except the time I bought three Flame Scallops and tried to acclimate at the same time (ignorance on my part). The Clown has made it. I didn't worry about the mollies. They were back in the thirty-gallon.

Oh yes, I haven't checked the ammonia since the last time I mentioned in the story (Five weeks after set-up). I quit checking the nitrates before that, and very rarely do I check the nitrites. The pH is never checked. There have been no problems, even with the addition of three anemones and one 6 inch Snowflake Eel that is now a little over 8 inches long.

I know I "broke the law" concerning the proper size and maintenance for a salt water set-up, but I feel I'm having good success with it. Good enough that I went out the other day and bought a Sweet Lip Grunt so that my Percula Clown would have some company. Results in this bold adventure in over-crowding will be written about later on.

* * * * * * * * * * *

(EDITOR'S NOTE: Bob had included the following appeal (challenge?) with his article:

> "The articles that will be appearing in this section are of an open format. Since breeding and maintaining fish would be the main topic every issue, please feel free to write about anything that pertains to the hobby in general."

He has opened the door for any aspiring author. Take him up on it! Share your experiences.)

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The Labrynth's Lair

By Fred & Sue Cotterell
Missouri Aquarium Society

CONDITIONING BETTAS TO BREED! HOW LONG DOES IT REALLY TAKE?

We were recently asked how long it took, and how difficult it was to breed the various members of the Genus, Betta. There are some thirty-odd members of this Genus ranging from the demure Betta picta to the monsters, of sorts, Betta macrostoma and Betta unimaculata. All of the species take different amounts of time to condition until the time they are producing viable fry. The degree of difficulty varies from fish to fish. As some of the cichlid breeders encounter frustration with some of their fishes, i.e., Cynotilapia frontosa, we betta breeders also have our share.

Bettas, be they wild or domestic, can be a lot of fun and interesting to watch. The key to successfully maintaining them is conditioning. Basically, there are three variants that seem to effect our fishes: (1) water quality, i.e., temperature, pH, and hardness, (2) tank set-up, and (3) feeding. We'll share the following information on the bettas that we have bred, or are attempting to breed.

B. splendens	Water Quality:	80° F. 7.0 80 - 100 ppm
	Set-up:	Bare to elaborate, Splendens are not too picky.
	Feeding:	Frozen and live brine shrimp.

B. imbellis	Water Quality:	80° F. 6.6 - 6.8 60 - 80 ppm.
	Set-up:	Needs cover in the form of plants and some simple structure. Covering of the tank is essential, since Imbellis are great jumpers.
	Feeding:	Frozen and live brine shrimp seem to be the food of choice.

B. smaragdina	Water Quality:	80° F 6.6 - 6.8 60 - 70 ppm. Water quality is paramount.
	Set-up:	Gravel, rooted plants and floating plants are all needed.
	Feeding:	Frozen and live brine shrimp, tubifex or black worms.

B. pugnax	Water Quality:	80° F.	6.4 - 6.8	30 - 60 ppm.
	Set-up:	Very heavily planted, caves and other structures. Minimum tank size is ten gallons.		
	Feeding:	Frozen and live brine shrimp, live black worms, small earthworms, small (newborn) guppies, flake foods. The Pugnax can be picky, so variety is needed.		

B. picta	Water Quality:	80° F.	6.8 - 7.0	40 - 60 ppm.
	Set-up:	Heavily planted, live or plastic, and structures are required, dim to medium light. Picta are shy.		
	Feeding:	Live foods, a must (baby brine shrimp, mosquito larvae, black worms, tubifex worms), frozen brine shrimp, flake foods taken in small amounts.		

We really take a lot of time adjusting our breeding tanks, now that we are a little more confident with the various species. We have found that the easiest way to condition our water, barring the use of a reverse-osmosis unit, is through the use of a peat filter. We set up a canister filter using floss, peat humus, gravel, and charcoal. We run this unit on a pair of fifteen-gallon tanks. The tap water in Arnold tests out at 8.5+ pH and a hardness of 300+ ppm. After being run through the filter for several days, the water tests out at 6.8 pH and 30 - 40 ppm. This is more than adequate for the maintenance of most of the Genus, seeing that they are shallow water fishes from the tropical zone.

For those species requiring plants and cover, we use live plants and flower pots. We attempt to keep plant types the same as those which would be found in Southeast Asia - hygrophilia, crypts, etc. We feel that fish breed more freely in these surroundings, and the tanks can become a show-piece in our living room or bedroom. We try to keep the lighting medium to bright, while keeping down the amount of algae. This is beneficial to the fish and fry.

How long does it take to condition a betta to breed? It seems as though our domestic Betta splendens were like convicts - just put them together and they spawned. At least, that's the way it seems now. On other hand, it has taken us approximately one year to produce viable Betta smaragdina fry. We had many false starts and small broods. A lot of experimentation went on to determine the proper breeding conditions. It took six months to get viable Betta imbellis fry. The Betta pugnax has taken almost a month to "do their thing." They have spawned once, and the male is now holding eggs, again.

We're still working on Betta picta. Although it has been bred, we have a few small ones that were trying to get to breeding size. We estimate that our first brood will take a few more months. Our newest effort will be the Betta unimaculata, a mouthbrooder that grows to a length of 4 to 6 inches. It

is reported that this species requires a large tank with plenty of hiding places and plants. Reportedly, they also take a lot of live food to condition, but once you get a pair going, they are hard to "turn off."

We'll keep you posted with the conditioning requirements for other bettas, as we successfully breed them. We hope this information is helpful, and will entice you to try to spawn a few wild bettas.

* *

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