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After adjourning the meeting, several people continued to converse about bettas, and eventually the topic moved down to the parking lot so we could close the building. ☺

Our September Meeting was canceled due to the events of September 11th.

Our thoughts and prayers are with the families and all who were affected by the tragedy.

MINUTES!



Betta Pigmentation Biology
Presented by Michael Pratt
of "A Betta Planet" in San Diego

August 18, 2001

Meeting convened at SLAC in Menlo Park

3:00pm - 4:00pm **Speaker Presentation**

Michael gave a very excellent presentation on his current betta pigment cell research, including information on the development of pigment cells in young fry, what cellular formations contribute to the Betta colors we see, and how mutations play a part in Betta genetics.

4:00pm - 4:30pm **General Conversation**

Michael was presented with some fish to take home to San Diego, including some marbles bred by Donna in Oklahoma (donated by Larissa) and some white crowntails bred and donated by Christine.

Everybody took the opportunity to talk to each other and to Michael about his presentation and other betta topics.

4:30pm - 5:00pm **Tank Raffle and Fish Auction**

A 20-gal tank and a 10-gal tank, donated by Wendy McKenna, were raffled off.

Fourteen bettas were auctioned off, selling from \$4 to \$60 (for a trio of opaque whites). The fish were from different breeders and came in opaques, steel blues, royal blues, multis, and marbles. We hope the winners will bring back spawns in a few months from now! ☺

5:00pm **Meeting adjourned**

OCTOBER AGENDA

Live Foods for Bettas
Presented by Jim Atchison

Saturday, October 20, 2001
3pm to 5pm
1421 Park Ave, Emeryville



For updates, please check the website at:

<http://cbs.bettas.org/>

About the Presenter:

Jim is a long-term fish hobbyist who has turned his love of the fish and the science into more than a hobby. His fish breeding has taken over his entire house and his name is well-known with wild-type conservation and preservation efforts. And he supplies us all with the best food for our babies - live food.

At "The Bug Farm," Jim has made available to all hobbyists the type of food that is more natural to the fish and better for them. A supply of core foods such as Grindal worms, whiteworms, vinegar eels and microworms have been supplemented by fruit flies, flour beetles and paramecium (among others).

Come to the meeting and find out all about how to raise and feed these delicious goodies to our fish!



OFFICERS' REPORT

The Officers requested from IBC, and received, a sanctioned International Show for the dates of April 6th and 7th, 2001. At the moment, the details are being arranged with the meeting hall and with assistance from the San Francisco Aquarium Society. If anybody would like to assist at the show, please contact Larissa or Christine. ☺

November is Elections! Please contact Larissa if you'd like information on any of the positions on the CBS board: President, Vice President, Secretary, Treasurer, and Member-at-Large.

November's meeting is also our Planning meeting for the next year. Please come and share your ideas and desires for speakers and topics and fieldtrips in 2002!

Check our website for the latest news!

<http://cbs.bettas.org/>



THE LIGHTER SIDE OF RAISING FRY

by Suki Mansour

I've made an important discovery and I thought you all might be interested in my new method for raising fry:

STEP ONE: Suck the "gunk" up off the bottom of the newly-hatched fry tank. Also suck up several invisible, white dots that are the newly hatched fry along with all the gunk. Use small containers so it will be easy to pick up the fry and put them back in their tank.

STEP TWO: Siphon up MOST of the "small invisible white dot fry" and return them to their tank. You will find that there may be several that you are unable to catch because they are so tiny and nearly invisible, but you are at least 99.9% sure they are still in the small container. Just as you get ready to dump the water out, take one last look and you will probably find a very fast moving white dot. Sometimes all you will see is some kind of movement.

STEP THREE: Spend the next two days and approximately 10,462 hours (read up on Einstein's General Theory of Relativity for instructions on how to do this) chasing invisible white dots around the

several small containers sitting on your kitchen counter.

STEP FOUR: After a couple of days of this (and never catching anything), throw your hands up in despair and pour all the water in the several small containers into one 5 gallon water bottle because you are sick to death of looking at all those small little containers sitting all over the kitchen counter.

STEP FIVE: You will now need to move that 5 gallon jug out of the way. A good place for it is in a corner of a room you don't use that much anymore since you are spending so much time with your bettas (like your arts and crafts room), and promise yourself that you will get back to it as soon as you take care of other things.

STEP SIX: Forget all about it.

STEP SEVEN: Wander into the area you don't visit very much anymore (see STEP FIVE) and notice the 5 gallon water bottle sitting back in the corner. Spend a few moments beating yourself up for failing to keep the promise you made to yourself in STEP FIVE, as well as a few other promises you've made to yourself in the past and you haven't kept yet either.

STEP EIGHT: Feel guilty.

STEP NINE: Sigh sadly to yourself, and decide to pour the water into little containers again anyway, just for the heck of it.

STEP TEN: Retrieve seven happy, healthy, white, but now very visible, fry that are about a quarter of an inch long and put them in one of your grow out tanks.

STEP ELEVEN: Try to remember how long ago you put that 5 gallon water bottle in your arts and crafts room (or whatever part of the house you put things where you are likely to forget them).

STEP TWELVE: Try to remember which spawn they came from.

STEP THIRTEEN: Congratulate yourself.

STEP FOURTEEN: Laugh at yourself.

STEP FIFTEEN: Make a new list of promises to yourself, and then send yourself a memo reminding yourself not to be so hard on yourself in the future. Remind yourself that as long as you are alive, there is still time to keep those promises.

STEP SIXTEEN: Put on a new pot of coffee.

STEP SEVENTEEN: Kick back and contemplate the answer to what is the meaning of Life, The Universe and Everything In It. (For those of you who don't know, the answer is 42.)



HOW I SPAWN MY SPLENDENS

by Christine Tanner

Every breeder has a different technique for spawning *Betta splendens*. So far, I've been fairly successful, with only a small percentage of my pairs refusing to spawn for me. You'll never know if you have a "hard to breed" pair until you try. So I just assume they will be difficult and take my time with each pair.

1. Pick a pair

Unless this is your "first time," you should pick a pair of Bettas to spawn with a specific goal in mind. You might be trying to improve finnage, color, add a new trait to an existing line, or just to maintain a line. Even with "experimental" crosses, it's good to have some idea of what you want to produce so that you will be able to cull accordingly.

The pair should be similar in size, with the female preferably being slightly smaller than the male.

2. Condition

For two weeks prior to attempting the spawn, you will need to condition the pair for breeding. This means feeding a lot of good foods and keeping their water nice and clean. Good foods are live blackworms, gut-loaded brine shrimp, daphnia, and any of the frozen live foods such as bloodworms and brine shrimp.

I try to feed breeders three times a day and change the water more frequently than normal. The female should clearly begin to fill with eggs, and still appear fat in the morning after not eating through the night.

3. Set up spawn tank

In the last few days of conditioning, it's time to set up the spawn tank. I prefer to use a ten gallon tank for spawning. They are cheap (\$10), and allow you to leave the fry in the tank until about one month of age unless the spawn is very large (over 200 fry!). Just about any size container will work, but keep in mind that you will later need a growout tank for the fry.

I usually add enough water to make the tank just over half full. The shorter the distance the male has to travel to the bottom of the tank to pick up eggs and fry, the less tired he will become. I add Prime to condition and dechlorinate the water.

If a pair is being particularly stubborn, I will add some blackwater extract on the second day.

I suppose my spawn tanks may look "cluttered" to some, but I think it helps save the female from excessive aggression. The most important component is the heater. Set this to keep the tank at a stable 80 degrees F. If you can only put one thing in a tank, make it a heater! Next I add a filter, either a small sponge filter or a box filter with floss. I set the air to just barely bubbling. Then I add some hiding places for the female. PVC elbows and small clay flowerpots work great. I give the male a half styrofoam cup to build his nest under.

Lastly, I add live plants. Live plants provide a hiding spot for the female, a biological filter, and a source of food for fry. Java moss, watersprite, duckweed, salvinia and java fern are good choices.

You will also need a cover for the tank, either a standard glass top or an improvised covering (saran wrap).



Spawn Tank (w/bettas)

4. Add the male

After the temp in the spawn tank is stable, I add the male. This gives him time to check the place out and develop a sense of territory. Hopefully he will also note that I've given him a lovely place to build a nest that will allow me to watch the development of the fry.

5. Add the female in a protected place

After the male has begun patrolling the tank like he owns the place, I add a glass hurricane lamp cover to the tank. These can be bought at craft stores, like Richard's. I've tried jars and breeder nets, but they just don't seem to work as well, and tend to disturb the nest when removed. Then I drop the female into the hurricane glass and

usually provide her with some live worms to distract her from the big male about to come check her out!

6. Watch for signs of interest

At this point, the male should become very interested. Its also a great time to get some wonderful photographs! Depending on the reaction of both parties, I leave the female in the glass for several hours. During this time the male will usually start building a nest under the cup or in the plants. Even if he doesn't, I continue on to the next step.

7. Release female

Several things may happen at this point. The male may attack the female and she will run and hide. The two may flirt for a while, and may start spawning, or the male may just get aggressive, and the female will hide. Or, worst case scenario, the female will attack the male and he will hide! I watch the tank for at least a half an hour to get some idea of how the two are going to behave.



A Happy Pairing
(female head down, interested)

8. Remove female if necessary

I only remove the female (or male) if the damage to them is severe. I consider severe anything more than chewing on finnage. If scales or chunk of flesh start getting removed, the female is in danger and needs to be removed. Fin damage is no big deal, and you must expect that the females fins will get nipped by the male, as it seems to almost be part of the courting ritual.

9. Successful spawn! (if not, recondition and try again)

I give a pair one week to spawn. During that time I feed only live foods in the spawning tank twice a day. As I write this article, I've got three spawn

tanks set up. The pairs were introduced two days ago. I can see that one of the females is ready to go (head down under the nest) but the male is just showing off and building the nest – hasn't even tried to wrap around her. The opaque pair has shown some interest, with the female head down, but the male doesn't seem much into building a nest for her. And the melano pair looks good, the female shows vertical bars and the male has a great nest, but neither is showing any other sign of spawning. I expect by tomorrow I should have at least two nest full of eggs. Patience is key – if no one is getting beat up too badly, leave the pair alone! As I mentioned earlier, I usually add some blackwater extract if the pair don't spawn the first day. About ten minutes after I added the extract today I started to see some interest from the females who had been mostly hiding up to that point.

If, after my patience has run out (about five days), there is no spawn, I'll remove the pair and either recondition and try them again in a month, or I'll just try another pair.



Successful Spawn!
(male looking for eggs, while female floats)

10. Watch dad

If the spawn is successful, and you see there are eggs in the nest, remove the female when you think you have enough eggs, or when the male starts chasing her from the nest.

Keep an eye on dad – is he eating the eggs? He will move things around a lot, and may even

move the entire nest across the tank. If this is the male's first spawn, don't remove him even if you think he is eating eggs. He may only be removing fungused non-fertilized eggs. If after three days you notice all the eggs are gone and no fry have hatched – then you can classify him as an egg eater. Try the spawn again, and remove the male if you see him making lunch of the eggs or fry.

11. Fry hatch

The fry will begin hatching in about two days. Keeping eggs in the nest is easy – keeping fry in the nest is a lot more work for dad. The fry will sink and try to swim back to the top, but they usually need help from dad to keep them up in the nest. Floating plants are helpful, as I've noticed the fry tend to "stick" to the roots of floaters better than anything else.

12. Freeswimming fry– remove male

Some folks remove the male earlier, but I wait until I spot fry that are clearly swimming horizontally before I remove him. It's always a test of patience to try to net or scoop out a male that is still trying to hold the nest together!

13. Add first fry food (vinegar eels, infusoria, microworms)

Time to start adding some food for the fry. Our October meeting's speaker, Jim Atchison, is just the guy to talk to about live foods. I'm a big fan of vinegar eels, because I think microworms are stinky! But Jim will give us the pro's and con's of each at the meeting, and you can make your own decision.

14. Start BBS and water changes

And now comes the hard work! Hatching BBS, siphoning out gunk, and water changes – Fun Fun Fun!



A Courting Pair



CLEANING FRY TANKS

by Larissa Williams

As a general rule of thumb (there are always exceptions), what I've observed is:

- bare bottom tanks with nothing else in the tank (no plants or filters) **need** to be cleaned or the fish will start a massive die-off in about 7-10 days after hatching from the gunk on the ground. (There's gunk, and then there's gunk... ~..~)
 - the smaller the tank (and floor surface), the greater the need for cleaning sooner.
- bare bottom tanks with sponge filters and live plants don't need cleaning for about two weeks to a month. The sponge filter cleans a lot of the bad gunk, and the live plants give the fry something to rest on besides the gunky bottom. (java moss and java ferns are excellent) The more live plants, the less the need for cleaning for longer periods of time.
- graveled tanks with sponge filters don't need to be cleaned for a month or so (however, the fry can't be fed microworms...)

No matter *what* the internal tank conditions are, the main thing to watch out for is how much the fish are being fed. If there's dead food accumulating on the bottom, the tank is polluted and the fry are going to die. Young fish should be fed often as much as they can eat, but if they're overfed, their tanks are their deathtraps.

And be careful of what else can eat the fry... ~..~ Snails are good for eating the uneaten food, but remember that they can also eat sleeping fry. (I would personally recommend, if you want snails in the tank, to devote a corner to some gravel and put in the absolutely smallest baby trumpet snails you can get from your other tanks. If you see a large snail in the fry tank, take it out immediately and replace it with a couple of itty bitties.)

If in doubt – call a fish buddy! It never hurts to have a second set of eyes and other experiences. ☺



BREEDER'S CORNER

The Breeder's Corner is a way for the members of CBS to learn what Betta lines other members are currently working on. This is not a list of what members have available for sale, but rather what they are working on so that members can work together to improve certain lines by trading stock. If you wish to be included in the Breeder's Corner listing, email your list of lines to Christine or Larissa, and you will be included in the next Newsletter.

Jim Atchison jim@atchison.com

- blues and variations

Larissa Williams 408-829-0903 alatri@yahoo.com

- blue marbles (st/dt)
- yellows
- black/steels

Wendy and Dennis Lee wgardull@home.com

- red solids
- multicolors: traditional Cambodian and red/white butterflys that are from the Cambodian line.
- opaques



An awesome photo of a mating pair from Wendy

Christine Tanner 925-837-8823
mopargrrl@mindspring.com

- white opaques (st/dt)
- black melanos
- blue marbles (st/dt)

- pastel crowntails
- yellows
- "salamanders" (mustard gas crosses)



This beautiful crowntail fellow is going up for auction at the October meeting (from Christine).

ABOUT THE CBS

The CBS is a club that was formed to allow people who are interested in bettas to:

1. Talk to other betta people (people who don't give you the 'what the heck' look when you talk fish).
2. Gain information about keeping and raising bettas from other betta people. (Education, Information, Problem Solving Assistance.)
3. Share information about bettas with other people. (Teaching others, especially new members. Attracting new people into the hobby. Helping the club flourish.)
4. Gain new fish and higher quality fish

Our meetings are open to the public, anybody can come. While we hope that people will join CBS as official members, it's certainly not required -- we're here simply to share our love of bettas and information for all other fans of these fish.

CBS members are all over the Bay Area and we tend to hop around for actual meeting places. Our meeting schedule is up on the website at:

<http://cbs.bettas.org/schedule.html>

Thanks for your interest in CBS, and I hope to see you at a meeting. ☺ If you have any questions, please let me know!

Smiles!

-- Larissa ^..^

CBS President 2001