

THE FILTER



Siniperca chuatsi
Chuatsi Bass

TBAS . . . Since 1992

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Photo Mike Jacobs . . . 2018



TAMPA BAY AQUARIUM SOCIETY

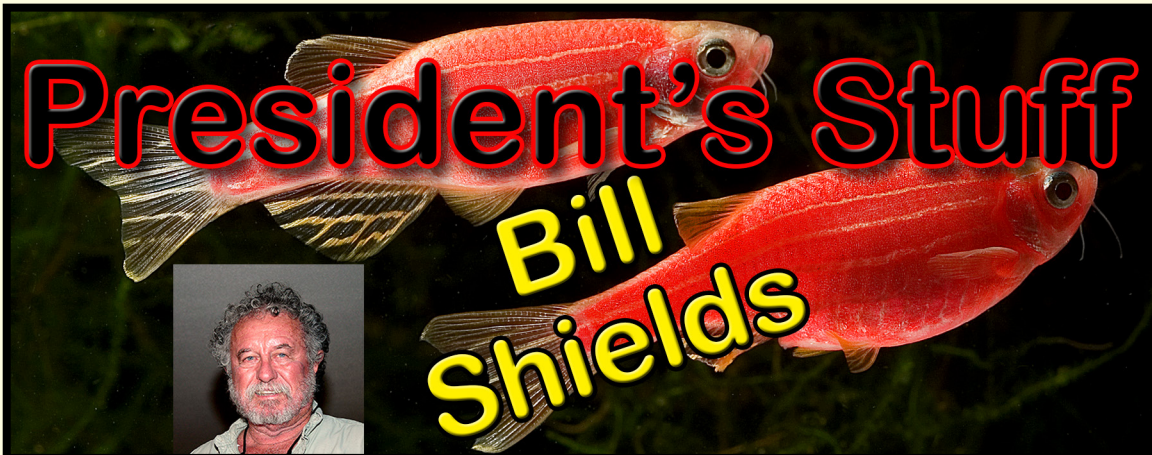
"THE FILTER"

Tampa/St. Pete, Florida

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The First Coast Betta Show at our May 14th meeting was a nice change of pace and gave us all an opportunity to see and bid on some quality show bettas. Let us give a big thank you to Paul and Aurelia Ogles and Bill Little for putting this event on for us. Also, Congratulations to Missina Burcaw for graduating and becoming an RN. She did this while being active in the IBC, Aquatic Club of Pasco and the Tampa Bay Aquarium Society.

If you did not attend the May meeting, please pick up the questionnaire from Bill Little and fill it out. The BOD wants your input on the club.

Just came back from the American Killifish Association's Annual Convention. Got to meet with old friends and make some new ones. Going to a national convention no matter which specialty group you decide to spend the time and money should be a bucket list item for all hobbyist. I brought back some new killifish and lots of memories.

This month we are back to the normal auction items (fish, plants and dry goods) as last month, due to time constraints, we only auctioned bettas.

It is time to start getting ready for the annual auction the 17th of Nov in the Historical Society Building in Plant City. Patty Moncrief is our show chair so let her know that you want to be a volunteer.



Percocypris pingi
Pingi
 Photo by Mike Jacobs 2018

Bill

Bill Shields, President, TBAS



External Parasites
by Joe Gargas **Part 2**

We will continue this study of ectoparasites by looking at crustaceans, including the copepods and isopods.

Parasitic crustaceans are dangerous ectoparasites of both fresh and saltwater fish; they are non-host-specific, and very widespread. They are divided into the copepods and the branchurians. The branchurians are small, flat crustaceans up to 1cm in size, the most common of which is Argulus. It has been shown that Argulus acts as a vector for viral diseases.

Parasitic crustaceans can be anchored, such as *Lernea*, or freely-moving such as *Argulus*. Their anchoring appendages are often very complex, and they penetrate deeply into the host tissue where they can cause severe damage. Usually, only the female copepods parasitize fish.

Copepods are usually seen as a mature female carrying two egg cases attached to the side of the fish. *Lernea* is the most common copepod parasite of both fresh and saltwater fish, especially young fish which can be killed by only a small infestation of parasites.

THE BRANCHURIANS: ARGULUS

This is the most widespread genus of branchurians, which are dorso-ventrally flattened crustaceans up to 1cm in length that are found mainly on the surface of freshwater fish. The genus *Argulus* contains approximately 75 species, but only about three are common in the aquarium trade. Of these, the most frequently occurring species is *Argulus foliaceus*, which grows up to 8cm in diameter. *Argulus* scrapes off the epidermal (outer) layer of the host's skin. It has two sucking discs by which attaches to the host as well as a pre-oral stylus, through which it secretes enzymes for digesting the host's tissue. This way, it can take in more than would otherwise be possible with its small mouth. Additionally, it has two proboscis which it uses for feeding.

This parasite can be very damaging as it moves freely over the body of the fish, repeatedly inserting its stylus into the epidermal cells. Eggs are discharged into the water, where they hatch, releasing free-swimming juveniles which must

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find a suitable host within two or three days. This crustacean grows large enough to be seen by eye upon examination of the host fish.

Most Argulus can only live in cold to moderately warm water; therefore, it does not survive long in our aquariums.

COPEPODS: LERNEA

This parasite is commonly known in the aquarium trade as “anchorworm,” however in reality it is not a worm at all, but rather a copepod in which the females assume the shape of a worm during the final stage of their life cycle.

One species, *Lerneia cyprinacea*, frequently affects both cultured and aquarium fish. This parasite lives in freshwater with a temperature ranging from 16 to 27 degrees C (60-81 degrees F).

SYMPTOMS AND PATHOLOGY

The female enters between overlapping scales and embeds herself in the skin at an angle. Fish which have a well-developed immune response towards *Lerneia* will reject the copepod, but a few days later, a “red sore,” actually a point hemorrhage, develops.

This is the origin of the name “red sore” disease, since some fish will have many red sores on their sides caused by multiple attachment attempts of the female copepods.

In smaller fish, the anchor of the copepod often extends into the internal organs, so that the fish is usually dead within a week after attachment.

TREATMENT

Chemicals will be most effective when directed at the free swimming naupli or copepod stages attached to the gills of an intermediate host. Good results can be achieved using sodium chlorite, with a chlorite ion concentration of 20-40 ppm and a pH higher than 6.0. Since the oxidant is actually chlorous acid, dropping the pH will increase the effective concentration of chloric acid. Trichlorophon was also reported to be effective, but some species, particularly piranhas, are extremely sensitive.

ISOPODS

In South America, parasitic isopods of the genuses: *Braga*, *Conilera*, *Ronicela*, *Aega*, *Livoneca*, *Ichthyoxenus* and *Riggia*, occur frequently on the skin of fish. They live in pockets of skin on the underside of the fish and more seldom, in the mouth.

PREVENTION IS PREFERRED

It is far easier and less expensive to avoid the introduction of parasites, rather than eliminating them once they have become established. New fish can be dipped briefly in solutions of salt, formaldehyde, or permanganate for the removal of monogeneans, but this will not kill the eggs of dactylogyrus, nor will it readily kill off crustaceans such as Argulus.

Healthy fish can normally support a limited number of parasites, but if the fish is weakened by poor water quality or disease, it may be quickly overrun with them to the point where it weakens and dies. Beyond this, parasitic worms and crustaceans often act as vectors for viral and bacterial diseases which may prove even more damaging to the host than the parasite itself.



Some Photos of Joe Gargas's Marlboro Red Discus

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As I sit at my computer trying to think of something to write about I think back on the last several weeks at work. Everything seems to go wrong at the same time. Two tanks sprang leaks. One was a cracked input pipe, the other was a bad seal. Another tank dumped 40 gallons of saltwater on the floor in the middle of the night because the floating thermometer got stuck in the overflow pipe and caused backup. Still another tank refused to clear and had animals dying in it. This was a case of over cleaning. The bacterial bed was never allowed to grow. However, the worst tank was the one that sat for 5 months unplugged with water in it. I was called out because the canister was stripped and had to be replaced so they could restart the tank. They drained the tank before I got there, but neglected to drain the canister. What an odor! I suggested they run bleach through the system for 24 hours before restarting the tank. In case you haven't guessed I do on-call work for commercial tanks, everything from training personnel to complete re-plumbing. Troubleshooting a tank is usually 50% equipment and 50% personnel.

Sometimes even the best of us will have a problem that we can't seem to solve, so never give up. Talk to others who have experience with tanks. Sometimes it is something you didn't think of. For example, when dealing with tanks in offices there are problems that don't usually happen at home like excess heat due to turning off the air-conditioning on the weekends, especially with

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computer controlled units in large office buildings. In one case the cleaning crew that came in on Saturday was throwing handful of food into the tank thinking the poor fish were not eating the whole weekend. Every Monday the tank was cloudy and sometimes there were dead fish. This can be expensive in a saltwater tank. Of course the number one problem is that people who know nothing about tanks are usually given charge of feeding them. Just when I get them trained they go on vacation or leave and I have to start all over again.

When trouble happens in a home there can be other problems. There was the case of a 20 gallon tank that was not overstocked and wasn't overfed and had dual filter systems on the tank, yet we could not seem to solve an ammonia problem. I finally went to the lady's house and looked in the tank. Everything seemed in order. I asked her about spraying air freshener or bug spray and found that she sprayed air freshener into the intake of her central air-conditioner. There was an output vent directly above the tank. As soon as she stopped spraying in the intake, the problem was solved. In another case a ten gallon hex tank had an ammonia problem that wouldn't go away even after four months. I asked about the filter system and it seemed to be adequate. I finally stopped by to take a look at it and discovered that there were 4 inches of gravel in the under gravel filter and there was a large carbon cartridge attached to the top of the lift tube which was blocking the flow of air coming out. The water was not circulating. We solved the problem by putting on a bigger pump and adding an air stone to the tank.

The next time you have problems unrelated to fish disease, you should consider other things that might affect your tank indirectly. I am sure glad that this month is almost over. Until next month keep your fish happy and healthy.



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the left!



Red Panda Barb . . . *Puntius fasciatus*

photo: Mike Jacobs 2018

“Purple-Longfinned Flyeater”



by Mike Jacobs

ED: I don't normally print older articles but I was looking through some and read this one???? Sooooo . . . hear it is . . . just having sime fun ☺☺☺!!!

Here's the problem. Louie has spent the last 12 years developing a “Purple-Longfinned Flyeater” . . . here after known as PLF . . . and he is now ready to sell them to the public. Well, along comes Susie . . . I could make a song out of that (I'm dating myself) . . . and she buys the first bunch of PLF's that Louie has for sale and she spent \$25 each for them. Now, she does all of the right things to induce the PLF's to do their rightful thing and bingo there is a batch of little PLFs at Susie's house.

Susie naturally doesn't want the enormous bunch of those little buggers running around the place so she goes to the local PLF fish store and offers up her good fortune to the person in charge and we now have a dilemma. Does she have a right to sell the highly prized PLF's as “Louie's PLFs” . . . or are they now “Susie's New & Improved PLFs” . . . or what? Does a person have the exclusive right to a color variety of animal??? Now remember Louie spent 12 years and Susie was lucky and only spent 6-7 months. What if the fish that Louie sold to Susie were inferior products of Louie's breeding stock.

If Susie knew that, then when she goes to sell her PLF's, then she should not say that they are Louie's PLF's, since she will be selling inferior stock and damaging Louie's name and reputation.

Is that OK? Does she owe any alliance to Louie? Is she under any ethical code to maintain the strain and sell the strain as Louie would do for his?

Since Susie's PLFs are just not the same high quality that Louie had and Susie knew that when she bought the PLFs but now that she wants to make some money, her PLFs are really inferior PLFs to Louie's PLFs. Now it is clear that she really is misrepresenting “Louie's PLFs” . . . oh my! Now, what if Susie mates a real PLF with a YSF . . . that's a “**Yellow Short-finned Flyeater**” . . . what does she have now? I know . . . a “PYLSF”, well when these are young they do show the purple that Louie's PLFs have but that eventually fades and yellow

show up. The questions are endless . . . what is right is not clear unless we all respect each other's work. If I buy some of Louie's PLFs I can't in all good faith sell them as "Louie's PLFs" . . . I don't think I could sell them unless I can guarantee the quality and that means PLFs X PLFs gives PLFs . . . and even then I might need permission from Louie . . . otherwise they are just Flyeaters . . . ! Think about it from Louie's view . . . wow!!!

I have experienced something in Florida that I didn't experience in the "northland." Fish shops tend NOT to buy fish from the local fish hobbyist/breeders. I know that there is always the chance of some disease, but in all honesty, I have gotten quite a few more diseases from dealers than from fellow breeders (I mean no ill will here), but if you think about it, the local breeder is more likely to not have diseases in his tank. He is most likely to be the one person's whose tanks will be spotless. Think about it pet shop owners . . . encourage your customers to breed fish:

- 1) Breeders are more loyal to the shops they sell to.
- 2) Your shop might be able to get some fish cheaper than normal.
- 3) Your customers will look to buy your fish because they are locally grown.
- 4) You will probably have cleaner fish than normal.
- 5) You will really be encouraging the growth of the hobby.

On the other hand . . . you breeders out there. Don't expect the local shops to buy everything you have at a full wholesale price. I know . . . maybe the shop paid \$.50 for a fish and sold it to you for \$1.50 to \$2.00, but you must understand that the shop may only want a dozen or two and you have 200 to sell. Well maybe the answer is to give the shop a break and sell them to the shop for \$.15-\$.20 each and get rid of a bunch and let the shop have a sale on the fish . . . consider what size you bought the fish at . . . most likely it was 3/4 to full grown, and most likely you have 1/4 - 1/2 size fish to sell the shop . . . you get less money here also. Along with this is the idea that the fish you sell must be of first class quality . . . no missing fins . . . no nipped fins . . . no missing gill plates . . . no stunted fish . . . nothing that you wouldn't buy yourself . . . THIS IS A MUST!!! The fish you sell MUST . . . MUST . . . MUST be in excellent health. If you ever sell a sick fish to a shop, don't ever expect to be welcome back in the shop. Lastly . . . spend money at the store, be fair with the dealers, they really are making a living with the fish they sell, you just think you are. Sometimes even be willing to take merchandise in exchange for fish . . . cooperation is the key to the ball game. Come on Fish Shop Owners . . . encourage the hobby . . . establish

yourself a good and fair policy about buying fish from breeders you know . . . trust me it usually works. The local breeders can be awfully nice people and they have some really nifty, healthy fish for you to sell if the whole thing is done right.

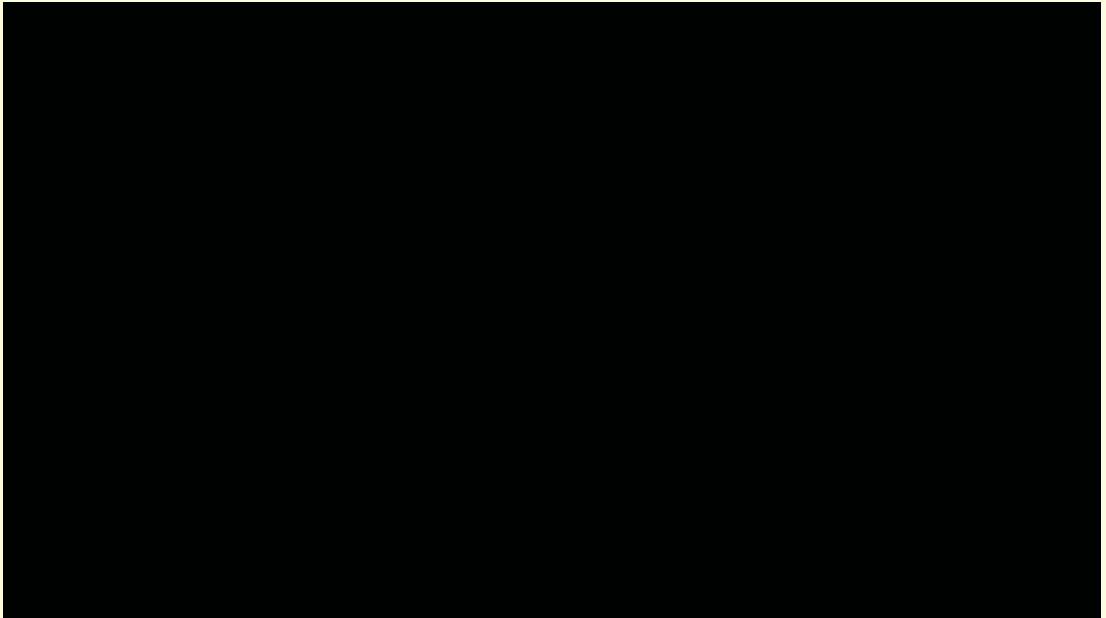
Boy am I smart . . . yea . . . Mikey'll eat it, give it to Mikey. Anyway . . . I've been breeding angels for about many-many-many years now. It's another story about how I got started and what I've raised, but I still piddle with them and I am always looking for a way to be more successful in the hatching and raising of these wonderful fish in a system that does not resemble a gazillion acre fish farm . . . soooooo one night I am cleaning the tanks and I think, hey, you don't have to always have PVC tubes they lay their eggs on falling down . . . why don't you "silastic" a piece of PVC to a piece of slate . . . great idea. So I found a piece of slate that is about 3" x 3" and perfectly flat on one side (so it won't wobble) and I cut a piece of PVC about 6-8" long . . . 45 degrees cut on one end. I positioned the PVC on the slate such that it sticks upright at a 45 degree angle and "silasticated" (is that a word? - it's a fish thing) it to slate . . . perfect, perfect, perfect. Now when the fish lay the eggs on it you can just pick it up and put it in the hatching tank and it has its own base and no problem . . . heh, heh, heh! It all went perfect. My albino angels spawned like two little . . . well, they just spawned . . . I grabbed the "spawning tree" and it's base came with it slick as slime and put it in the hatching tank and bingo . . . everything went perfect and they hatched and I was so proud I left the tube in the hatching tank too long . . . you are not going to believe what happened! Out of 300+ angels ALL but about 5 were down in the PVC tube and smothered to death . . . I'm not kidding . . . there was something to the current of the water passing over the top of the PVC tube such that all of the young as they just became free swimming they were all sucked into the top of the PVC tube and they couldn't get out and all died for lack of circulated water . . . and you think things happen to you . . . result . . . I took a hack saw and cut the PVC down vertically so that there is now a 1/2 PVC tube 6"-8" long glued to the slate. . . now it works super . . . just when you thought you think you know it all you tend to be jerked right back down to earth . . . **Fins Up!!!**

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by Joe Gargas

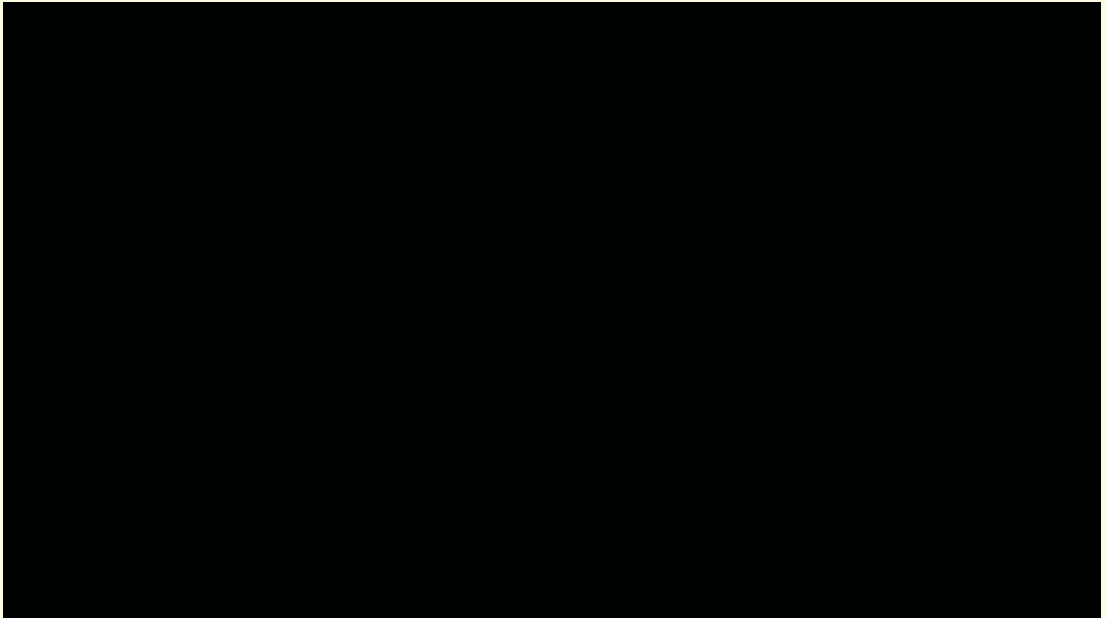
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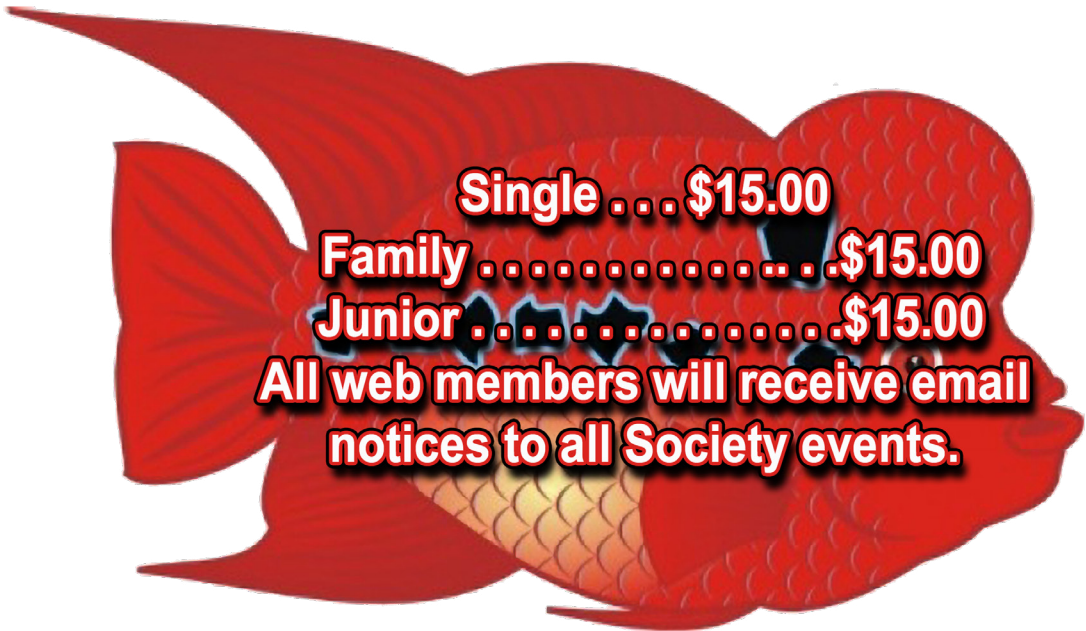
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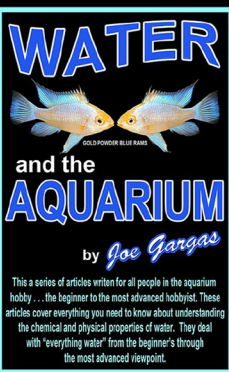


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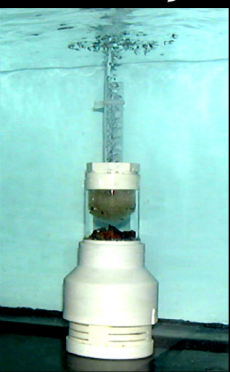


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