

**TAMPA BAY
AQUARIUM
SOCIETY**

**25
Years**



**ST. PETE/TAMPA
FLORIDA**

**Young Rainbow Cichlids:
*Herotilapia multispinosa***



THE FILTER

**December 2018
Volume 28 Issue 5**

Photo Mike Jacobs . . . 2018

TBAS . . . Since 1992



TAMPA BAY AQUARIUM SOCIETY

"THE FILTER"

Tampa/St. Pete, Florida

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Merry Christmas!!

I would like to thank everyone that attended our annual auction in November. I saw a lot of great fish and plants available for sale. I also want to thank all the volunteers for their hard work in organizing and running the event. If you were selling items in the auction you will be glad to hear that your checks are in the mail. I am looking forward to seeing everyone again next year.

We will be having our annual Pot Luck Dinner at this month's meeting. The club is providing the main dishes and is asking everyone else to bring a dish to share. We are also collecting toys for Toys for Tots and non-perishable food and canned goods.



Dre

Dre Alvarado, President TBAS

Schilbe marmoratus

Grass Cutter Cat

Photo by Mike Jacobs 2018



Tampa Bay Aquarium Society

ANNUAL AUCTION

2018

November 17th



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350 Bags
of Fish!



What
a
FUN
Day!!



I have spent several years trying to come up with a plan to create a fish room in my house. Well, I finally purchased a shed that I will turn into my very own “she shed”. Half of my shed will be used for gardening related things and the other half will become my fish area; however, I expect the fish area to overflow into the gardening area. My goal is to have my shed started by the first of the year. I hope to be able to share the process of building my fish setup with you soon.

My set up will be built for display purposes. I would like my tanks to all be planted and to be species only tanks. I have always loved killifish; however, I don’t know much about them. I have kept a few here and there and have had some luck so hopefully when I keep them more seriously I will continue to have luck. I have a lot to learn and I must restrain myself from buying all the killifish I see. Easier said than done. I know we have a bunch of killi people in the club. What are your top 5 or 10 killifish well suited for beginner killi keepers? I want to get some eggs to try and hatch too.

Another fish I plan to keep are bettas. I am particularly fascinated by the wild bettas. I have some experience taking care of betta fry but my experience is very limited. Do any of you wild betta keepers have any advice for me on fish room equipment I need to add to my she shed? I have read that wild bettas can be tricky but I’m not sure why. I have always been fascinated with Dario dario and pigmy sunfish so I plan to definitely keep those too. In the last few years I have fallen in love with Pea puffers and sparkling gourami. Since they are some of my favorite fish they will definitely have a space in my shed!



The quick, not-so-quick fish: My experience with

Nothobranchius eggersi

by Bruce Lilyea

The Orchid nothobranchius, *Nothobranchius eggersi*, is a small killifish from the seasonal marshes of Tanzania. I use the term seasonal because there is not always water in these marshes – they dry up during certain parts of the year where the adults lay their eggs in the muck and mud on the bottom of the swamp that will eventually dry out and then be rehydrated with the rains of the next season. With the added water from the rain, the fry will hatch and the life cycle of these killifish will begin again. But I didn't get my eggersi from Tanzania, they came from a fish keeper in Florida and were placed in one of my 10 gallon tanks that had a sponge filter, some floating plants, and a clear 32 oz. plastic container with about 2 inches of coir (sometimes referred to as a soil alternative and similar to peat moss, coir is a fiber from the outer casing of a coconut).

Fast forward nearly a year to the beginning of September 2018, I found a container of dirt that was on the shelf in my fish room. The container with the snap on lid didn't look like anything special – just black plastic recyclable polypropylene that originally came with 32 ounces of Greek yogurt. I filled it up with water and within a day, almost like magic, it was filled with about thirty little fish!

If you have spent any time around fish, especially around the Tampa Bay Aquarium Society, you have probably heard about killifish and the two primary ways that they lay their eggs - plant-spawning and peat-spawning. Every time that I see the little fish that hatch out of dirt I am amazed! It really is the quick, just-add-water-and-you-have-fish, type of fish!

Ok, so while that is all true there may be a little more to the story. This black plastic container that I mentioned earlier was marked 12/2017 and had got pushed to the back of the shelf before the demands of life became especially demanding as sometimes happens. December 2017 was when I had pulled "dirt" out of a killifish tank, dried it, and put it on the shelf. Although the timeframes vary, the eggs of this particular species need to be placed in a dark, dry space for at least three months for the eggs to fully develop. As demonstrated by the fact that these eggs sat on my shelf for nine months, the eggs will stay viable and there is some flexibility for when you choose to add water. Although the hatching process

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happened in less than a day after re-adding water, waiting for a minimum of three months before the eggs are rehydrated seems like forever. The *Nothobranchius eggersi* is both a quick and not-so-quick fish and, if you are looking for a challenge, I highly recommend that you try a *Nothobranchius*!

How to Dry Dirt

When breeding peat-spawning killifish such as those in the *Nothobranchius* genus, the process includes (1) preparing the fish with quality tank water and food, (2) adding a container with coir or peat - I typically use coir in a 32-ounce, clear container with about a two-inch round hole cut into the plastic, snap-on top. (3) After a few weeks I remove the container and dry the coir. (4) After the coir has been dried, I put it in a non-clear container on the shelf, (5) mark the container with the date and species, (6) wait the appropriate time, (7) re-add water, and (8) watch for fish to appear! Although this seems like a very straight-forward eight-step process, one of the challenges is how to dry the coir, peat, or what is sometime referred to as dirt.

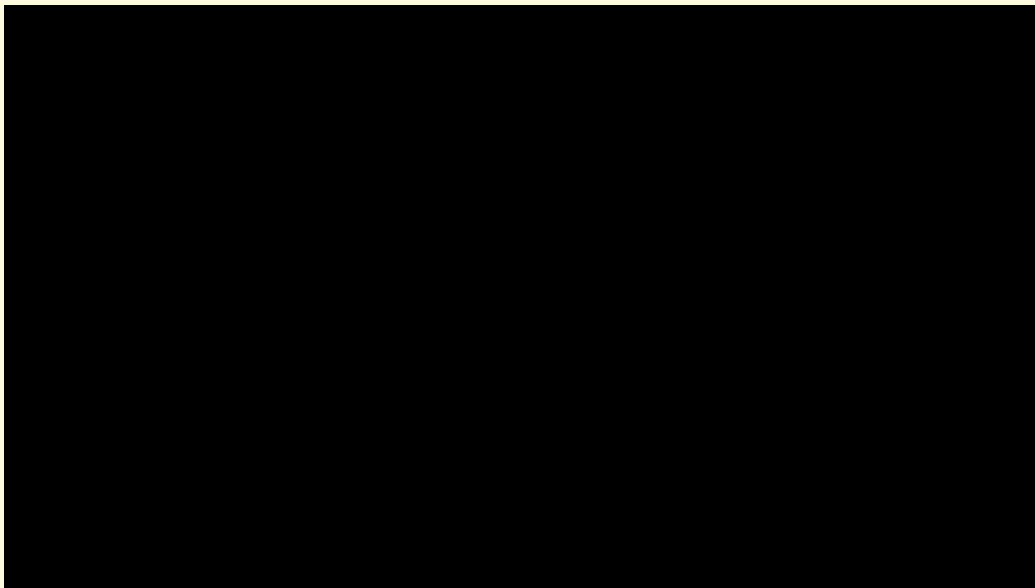
Drying dirt sounds really simple, but if the dirt/coir is too damp then the coir will start growing what appears to be a fungus and the eggs won't hatch and if the coir is too dry then the eggs also won't hatch. The common recommendation is that the coir or peat should be dried to the same humidity as a cigar. Since I have never rolled a cigar, I have always assumed that meant that it should be dry to the touch, but still look and act moist. But my challenge for a while was how to get it to the right level of dampness. I often would have coir that was too dry or too damp and then was left figuring out how to make changes. The solution to this problem came while watching a YouTube video interview with Frans Vermeulen (who is a friend of several TBASers). He recommended pouring the container with the coir from the tank through a standard aquarium net and then squeeze out most of the water. Then place the coir on to a square piece of chamois cloth (mine is about 18 inches square and was purchased from the local auto parts store). With the cloth laid on a table, I fold part of the cloth over the coir and roll the coir back and forth between the top and bottom of the cloth until the coir reaches the correct level of dampness. Using this approach, it is a quick process with no waiting for the coir to air dry. The chamois cloth can be reused once it has been rinsed in clean water and hung to dry. The full video can be found at: <https://youtu.be/XA8sUkC-ReA>.

Next month I will write an article on raising peat/dirt spawning killifish fry. It's kinda easy but you have to follow some things pretty closely - Mike Jacobs

Angelfish & Eggs



Angelfish & Eggs Video [Click on the](#)  [to See Video](#)





The Proper Feeding of Your Fish

by
Darin
Gasperson



How well do you feed your fish? Next to filtration, most important factor concerning the care of your aquarium is proper feeding. More often than not, aquarist feed their fish one kind of food, usually flakes, once or twice a day and leave it at that. Although a single staple food can provide a good basis for a well rounded diet, you shouldn't rely solely on it to keep your fish healthy and disease free, its colors good, and the potential for breeding up. Just as you don't eat only potato chips at every meal, you don't want to condemn your fish to a diet that is unhealthy and not very exciting.

Remember, it is more beneficial for most groups of fish to receive many small meals a day than to restrict them to only one or two gorgings a day that will be of far less benefit to them nutritionally. In many cases when certain groups of fish are fed many times a day they are far less likely to show extreme aggression problems than if fed only once or twice. Important Fish Proverb: Feed less food more often. You can overfeed the tank, but chances are you're not going to over feed the fish. Just be sure to exercise good judgment. There are exceptions, one being that large predatory fish can be fed less often. Sometimes only a few times a week will suffice if the right amount of food is offered.

There are three feeding behaviors or groups that all fish fall into. These are: carnivores, herbivores, and omnivores.

Carnivores, put plain and simple, are animals that feed on meat. As far as fish are concerned, meat could include other fish, inverts, plankton,

and in some cases, whatever happen by (frogs, snakes, turtles, birds, seals, arms, legs . . .). One of the most neglected groups of fishes are the fish eaters, more appropriately referred to as piscivores. All of you have either owned or know someone who owned an oscar. What was it feed? Probably feeders. There are a few things you need to know about feeders: The life of a feeder is a rough one being extremely overcrowded in a tank with poor filtration. They may go for days without food. Most of the time before the shop owner gets them they have already been so mishandled and neglected that their nutritional value has been severely decreased. Not only that, but the risk of introducing disease to your aquarium by placing these fish in your tank (not to mention feeding them to your fish) is a valid concern. Nonetheless, there is a solution. You can quarantine feeders for at least a week before feeding them to condition them with good water quality and regular feeding, and to observe the fish for signs of disease. Still, you shouldn't rely solely on feeders for your fishes' diet.

Many fish will gladly accept a wide variety of prepared and frozen foods. These could include flakes, pellets, frozen fish, krill, prawn, etc. For fish that are plankton feeders, flakes and pellets are fine, as are live brine shrimp offered several times a week. One way of making brine shrimp more nutritionally complete is to feed the shrimp spirulina powder about half an hour before you offer them to your tank. This will provide your fish with a protein packed live meal they will love.

Some frozen foods that are great for your meat-eating fish include blood worms, plankton, daphnia, and mosquito larvae. I don't recommend feeding frozen brine shrimp. If you look at the guaranteed analysis, you will find that it is about 99% moisture, which doesn't leave much room for nutrition. By the way, always examine the guaranteed analysis of frozen food to be certain of the nutritional value. For example, if the moisture content is high (over 95%), this could decrease the amount of nutrition available. This also applies to dry food.

The second group of fish are herbivores, fish that feed mostly on plant material. Most plant eating fish are grazers. Throughout the daylight

hours they are constantly feeding on vegetable matter. whether it is the leaves of plants, or algae on rocks and driftwood. Knowing this, you should offer several feedings a day of small amounts of food. It is also beneficial to offer herbivores some kind of planktonic food once or twice a week, since they “accidentally” ingest this type of food in the wild as they graze for plant material.

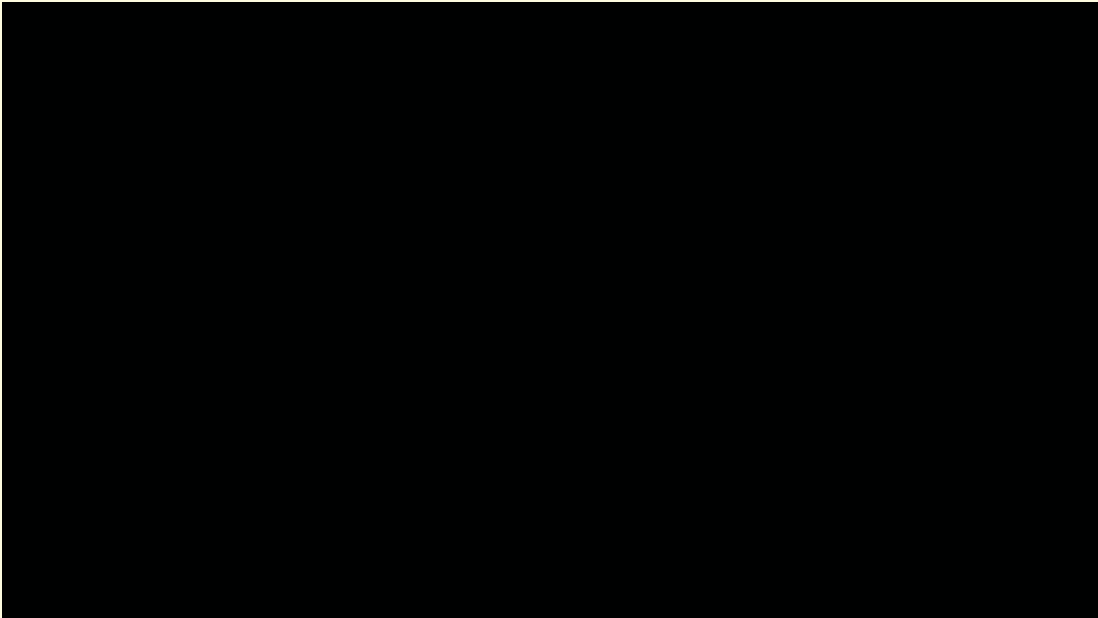
So many times I have heard, “I had an algae eater, but he died!” When I ask the customer what they feed the algae eater, the reply usually goes, “Feed them? Nothing! There was plenty of algae in the tank.” Another Important Fish Proverb: Algae eaters cannot live on algae alone. This is especially true if there are more algae eating fish than algae in the tank. There are many ways of providing variety for these fish. You can feed zucchini, cucumber, lettuce, and spinach for freshwater fish, and live caluerpa (a micro algae) for your saltwater fish. There are also many prepared foods on the market today that are created especially to satisfy the dietary needs of plant eating fish. Ask your retailer for some advice on these foods.

The last group of fish are omnivores. These fish eat a combination of plant and animal material. This group would appropriately include scavengers. When dealing with these fish , you should try to provided the fish with a variety of the aforementioned foods. For scavengers, offer food that sinks to the bottom and is directly targeted to the needs of the fish in question.

By feeding a variety of foods to all of the fish in your tank, you can greatly reduce the chances of disease, help keep colors vibrant, and increase the chances of your fish living a long and productive life.



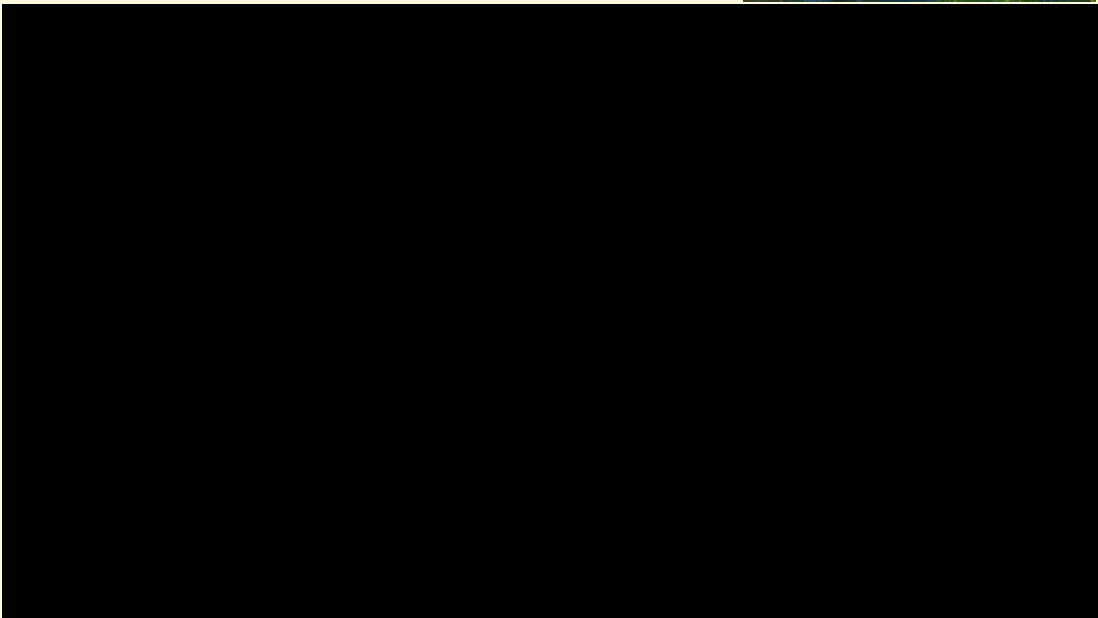
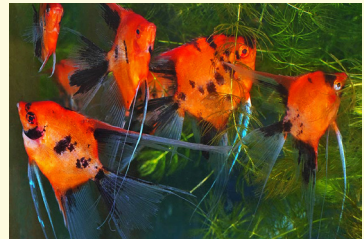
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THE BEST KOI ANGELFISH IN THE UNIVERSE

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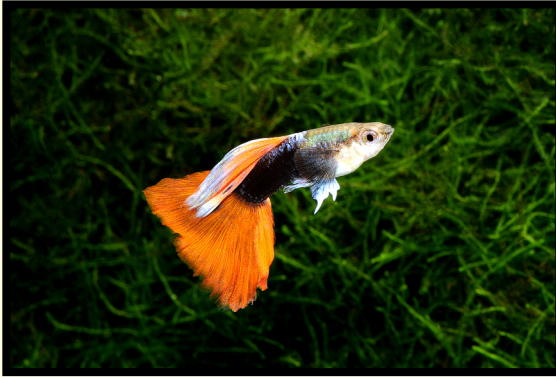
Photos by Mike Jacobs

Photos Photos Photos Photos Photos



I was cleaning out the photo files on my computer and thought . . .
WHY WRITE???? - JUST SHOW!!! Here you go . . . ENJOY!!







Nothobranchius rachovii 'Beira 98'



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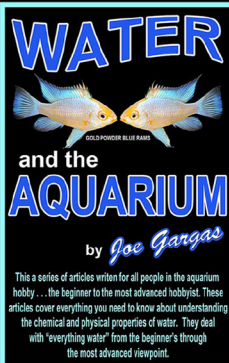


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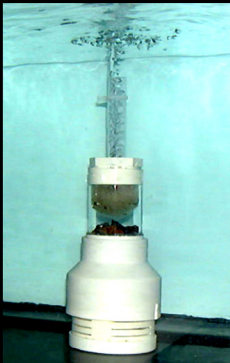


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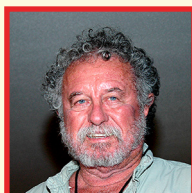
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**Tampa Bay Aquarium Society
St. Pete/Tampa, Florida**

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