

A NOTE FROM THE  
EDITOR

Reefers,

As I reach out to you once again, I hope this note finds you & your tanks in healthy & tip top shape. The month of March was a very busy month. On March 14, MAAST held its Annual Frag Swap located @ the Hamilton Community Center in San Antonio, TX.

Special thanks go out to our Events Coordinator – Kristy Dean (aka Kristy) & our events committee for a superb job planning such a successful and enjoyable event. The food was catered by a member of the world famous Grand Champion winning BBQ cooking team, The Tejas Cookers based out of San Antonio & Houston. On the menu were chicken fajitas and the very popular slow, smoked brisket, served with rice, beans, and all the trimmings. It was delicious to say the least. Many of the attendees enjoyed a round or two (2) of the mystery frag swap and to our delight as well as others, it too was a success with many going home with a frag or two (2) maybe even three (3). I was glad to see that everyone was having a great time doing what they love the most, talking about their reefs with friends, and enjoying each other's company.

Looking forward to next month, don't forget to mark your calendars & pre-pay for the April behind the scenes San Antonio Zoo event which will be held on April 10<sup>th</sup>. Please see the upcoming events for more information. Until next time, I will see you soon! Take Care

-Eve Vialpando  
(aka Pennies2Cents)



March POTM Winner– Stoneroller

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## Advocating for the Anthias: Learning from my mistakes

A shoal of anthias is one of the most spectacular displays of color and movement that one can find in a reef tank, and my beloved trio of lyretail anthias (*Pseudanthias squamipinnis*) and trio of bartlett's anthias (*Pseudanthias barlettorum*) in our 210g reef are often the first fish noticed by newcomers admiring our tank. To successfully keep these two trios hardly qualifies me as any kind of expert on the subject of anthias. In fact, like many other of the challenges in this hobby, it is actually my failures in trying to keep anthias over the past three years that have educated me the most. These difficulties have left me scouring the internet in the wee hours of the night and driven me to converse with reefkeepers all over the globe about their anthias challenges, how they managed to overcome them, or in some cases did not manage to do so.

The name "anthias" most commonly refers to the 38 or more currently identified separate species within the genus *Pseudanthias*, although it also encompasses a couple of other genera within the subfamily *Anthiinae*, or "Fancy Sea Basses" of the very large family of *Serranidae*. Most researchers commonly agree that we have only just begun to properly identify the numerous species of anthias that can differ subtly in coloration from one region or environment to the next. It can be challenging and confusing to properly identify a particular species of anthias, even for the experts, which is just one of many reasons that make attempting to keep anthias in a reef so fraught with difficulty.



This pair of ignitus anthias was sold as disparis, another good example of how tricky it can be to properly identify species.

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It is imperative to understand some of the characteristics that make this group of fish unique before one attempts to keep them. Like many fish on the reef, anthias are sexually dimorphic and dichromic, meaning that it is usually easy to distinguish the males from the females by their differences in color and form. One of the things that makes anthias so interesting is that they are protogynously hermaphroditic, so all anthias begin their lives as females with the potential to live as either gender. The largest and most robust of the group becomes the male (which is the opposite of the clownfish, whose gender changing from male to female makes them protandrous hermaphrodites).

In nature, the anthias live in large harems with one male to many females. This fish has complex social behaviors with a very definite hierarchy, with the bigger and stronger in the group challenging the smaller and weaker down the line with quite a bit of aggression at times. It is interesting to note that in the literature one can find recommendations to keep anthias singly, in small groups, and in large groups, with various arguments for each. What is clearly agreed upon is that anthias require clean water conditions, enjoy strong current, need as large a water volume as possible (generally recommended for 50 - 100 gallons or more) and most importantly, *there can only be one male per harem*. The presence of another male will always mean a fight to the death. Even in a 20,000 gallon reef system, professional aquarium keeper Joe Yaiullo reports watching two male anthias lock jaws and fight furiously over the available females.

When Live Aquaria first delivered my three female lyretail anthias, I was surprised to find how much I enjoyed watching them swim in the water column, and they quickly became favorites. This is a very active fish, almost always schooling out in the currents once the initial shyness and hiding is overcome. It took only a couple of weeks before it became clear which of the three females was destined to become the male, as we enjoyed watching the one that was noticeably larger begin to get that elongated spike at the front of its dorsal fin, and within a couple of months the coloration change from bright orange to dark pink or fuchsia was well underway.

I almost instantly wished that I had gotten more than three anthias for the harem, as I envisioned large swarms of movement and bright flashes of color, so I looked around for a couple more females to add. Luckily we came across two female lyretails available for sale at two separate local fish stores. We bought both and introduced them enthusiastically to our tank. Within minutes, it was clear that we had a problem. The healthy and robust newcomer “female” must have begun the process of changing to a male while in solitude, and instantly challenged the male of my trio. The two locked jaws and spun about, fighting with a frenzy and without stop. It was very evident that one or both would be dead within the hour, so the big beautiful newcomer had to be scooped out and re-homed.

The smaller and shyer new female purchased hid instantly and was not seen again for a couple of days. When she did finally come out of hiding, we discovered that she was

## POTM WINNER:

### Stone Roller

#### ABOUT THE PHOTO

This photo of a LE Silver Bullet *A. prostrate* - a small polyp stony coral was taken by Stoneroller. He is growing this coral in his zoa-dominated 72g bow-front aquarium under 250w MH (14k Phoenix bulb) and two 36w T5s for actinic. The tank has quite a bit of flow, using Vortech for circulation in addition to a modified MJ1200 and Koralia 4. For removal of organic materials, stoneroller relies on a DAS EX-1 skimmer and a refugium with deep sand bed. He supplements the tank with two -part dosing via a DIY auto-topoff system. This photo was taken

## March Birthdays

Valkim,  
hanknmorgan  
taldrich  
Noober  
olaggie01  
theangrycrab  
MissT  
MKCindy  
jankyjameson  
Europhyllia  
The\_Game  
Teeb  
Rvela

**We need writers!**

Now, a lot of you think you can't write an article -but we're not only looking for advanced topics here - we need beginners' stories, tips, product reviews, and more!

Send us your thoughts... any and all are welcome.

Looking forward to working with you.

Sincerely,  
The Newsletter  
Committee

March Frag Swap:

On March 14th, 2010, MAAST held its annual Frag Swap in San Antonio, TX. It is with great pride in our events committee as well as this organization that I announce the complete success of yet another MAAST Event.

A special thanks to our Events Committee for making this event possible for everyone to enjoy!

**You all are awesome!**

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not actually a lyretail anthias at all, although she had looked remarkably like one in the store and had been labeled as such. It can be extremely difficult to ascertain just what species is being sold in the dimly lit conditions of a local fish store, especially when these stressed out fish are not showing their full coloration. My best guess was that she was probably a dispar anthias (*Pseudanthias dispar*), and we referred to her as our "liar-tail" since she had been mislabeled in the store. She appeared not to mind joining in the harem and all seemed well for three or four months, with this newcomer always being the "runt of the litter" in the group. Eventually one day she disappeared. From subsequent readings, I now understand that my little dispar was always doomed to be the "low man" in this social hierarchy, and was unlikely to be allowed to live by the larger lyretail group.

My blunders were only beginning with my new favorite colorful fishes. I succumbed to impulsivity one day at another local fish store and purchased a carberry anthias or threadfin anthias (*Nemanthias carberryi*), which is actually from a different genus than my *Pseudanthias* lyretails. This fish also hid as soon as it was introduced to the tank. When it eventually came out of hiding, days later, I found to my dismay that it was excited and stimulated by the smell of food in the water column, but would not eat anything it was offered. In addition, I realized this beautiful specimen was another case of misidentification in the poorly lit local fish store tank, and that I had actually purchased an evansi anthias (*Pesudanthias evansi*), one of the more difficult species to keep in captivity that is often cited as best left on the reef. Determined to right my wrong, I read everything I could find about the evansi, offered it dozens of kinds of foods, everything that I could get my hands on, and watched it pick an occasional copepod off the glass, eat a few bites of live brine shrimp, and slowly starve to death. It was a horrible heartbreaking way to become educated about a fish.



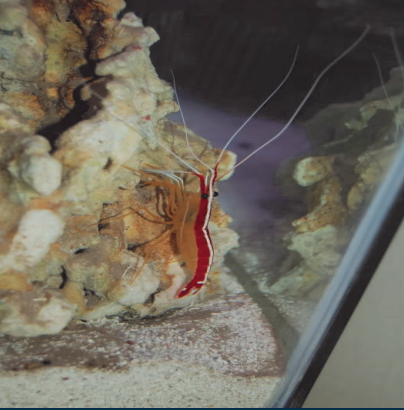
Evansi anthias inevitably starve in captivity.

Starvation is actually the most common cause of death for anthias in captivity. They can be picky eaters who have difficulty learning to accept prepared foods and often need to be weaned off of live foods. They are also said to have very high metabolisms with their constant swimming in the water currents, so literature recommends feeding them several times per day, optimally offering as many small feedings as possible. I have an additional theory about the need for numerous feedings that relates to their social hierarchy. I have watched a male anthias so preoccupied with asserting his dominance over the females, chasing them away from food at feeding times, that none of the group seems to get more than a bite or two for all the competition.

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Trio of bartlett's anthias, schooling with male lyretail anthias, in the author's 210g tank.



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The male always seems to get the most food in my trios, with the alpha female getting a bit more than the lowest ranking female. It is no wonder that my tiny “liar-tail” dispar anthias perished in this highly competitive environment.

Our lyretail anthias trio arrived fully quarantined and accepting frozen mysis, so we were quite lucky in that respect. It took about six months before they became more adventurous eaters and learned to accept New Life Spectrum pellets in addition to a variety of other foods we offered them. Our feeding habits are a bit inconsistent: some days they will be fed two or three times per day, other days only once, although we made an effort to try to feed at least twice per day in the first three months after introducing a new trio of anthias, to help them fatten up and gain their strength.



Trio of lyretail Anthias is made up of a male (pink) and two females (orange).

Another risk for keeping anthias is that they are famous for having intestinal worms. The recommended method of treatment is to gut-load live brine shrimp with Prazipro de-worming medication. The brine shrimp eat the Prazipro and then are fed to the fish, which is then effectively de-wormed. This is, of course, a good argument for quarantining any new fish. Quarantining the anthias, however, is a bit more controversial, as the need to provide good hiding places and get them eating well to reduce their stress is paramount for their survival. According to Wet Web Media, the anthias is one of the only fish that Bob Fenner recommends skipping the quarantine tank and introducing directly into your display tank.

The unique social hierarchy of the harem can make the grouping of anthias particularly difficult. Some of the larger and more aggressive species, such as the pink square anthias (*Pseudanthias pleurotaenia*) can be so competitive with one another that it is difficult to get them to accept their same kind without hundreds of gallons to keep them in. Odds are better when they are captured together and imported as a group, but this handling process is never guaranteed. A group of all females is the safest way to establish a group, allowing the fish to sort out their dominance and decide among themselves which will become the male, however it is not unusual to lose a fish or two even in this less risky sorting out process.

As aggressive as the anthias can be with one another, most are remarkably shy and peaceful in a reef system, and for best results, need to be introduced early on in the order of stocking a tank. They will fare best without overly aggressive tankmates. Many of the more exotic and expensive anthias species, such as the blotched anthias (*Odontanthias borbonius*) or the amazing ventralis or longfin anthias (*Pseudanthias ventralis*) are from deep waters and their price tags reflect the risk to the diver in acquiring them as well as the extensive care required in acclimating them to the surface. One

## Helpful Tips:

### Optimum Levels

pH 8.1 - 8.3

Specific Gravity 1.026

Alkalinity 8 dKH

Calcium 450 ppm

Magnesium 1350 ppm

Nitrate 0

Phosphate 0 - .01 ppm



would certainly not want to risk putting valuable specimens such as these in a tank with aggressive tank mates.

Different species of anthias can co-exist together, however, only in very large tanks. When I introduced the trio of bartlett's anthias to our 210g that already had an established trio of happy lyretails, I knew that there was a certain level of risk involved. Fortunately, this addition went very smoothly and the two trios are often out schooling together, riding the current of our Vortechs as a large group. We were able to accomplish this mingling without incident because of the relatively large water volume of our system and because of the two species being among the most peaceful and easy-to-keep among the anthias family.

Finally, understand that one of the great challenges of ethical reefkeeping is that there are occasionally rules that are made to be broken. There are species described as hard or impossible to keep that I have seen swimming in dazzling flashes of color in a large and expertly kept system. We learn more about keeping these fish every day that make it more possible and I hope that I someday see the most difficult species of anthias, such as the evansi and the purple (*Pseudanthias tuka*) being successfully kept in our home aquaria.

**Until that day, follow these guidelines for your best chances of success:**

- **Choose one of the less difficult species to keep, such as the bartlett's, dispars, or lyretails.**
- **Get a group of three or more females and let the fish sort out which will become male.**
- **Introduce the anthias as your first tank inhabitants or early in the stocking order.**
- **Be choosy about where you buy your anthias from to assure healthy, eating specimens and accurate species identification.**
- **Keep anthias in 100g tank or bigger with lots of nooks and crannies for hiding, excellent water quality, as strong a current as you can provide, and less aggressive tankmates.**
- **Have live foods to offer in the beginning until they are weaned on to frozen and/or pellet. Feed two to three times per day, especially in the beginning, and never less than once a day.**

Kristy Dean  
(Kristy)

## Did You Know?

**Protogynous hermaphrodite** - refers to fish that begin life as females but have the ability to become either male or female, depending on the needs of the environment (for example, anthias).

**Protandrous hermaphrodite** - refers to fish that begin life as males but have the ability to become either male or female, depending on the needs of the environment (for example, clownfish).

Anthias are protogynous hermaphrodites, so the largest female becomes the male in the group.

## Gender Bender

After adding a new alpha female to my group of lyretail anthias, I began to observe changes in the male's coloration. The tips of his tail reverted to orange and his anal fin is clearly orange as well. These had both been a bold pink.

This led me to read up on whether or not a fish has the ability to change back to its original gender when the social order is challenged. Although I have not been able to find any documented cases of this phenomenon (and have actually read to the contrary, that it does not occur), True Percula fish store in Arlington, Texas reports a similar event in one of their display tanks.

True Percula added a new pink square anthias in its stunning 400 gallon display tank. Over the course of a few months, the established male in the group began to show a fading of his pink square markings, while the alpha female began to develop the traditional male pink square coloration. Today the two fish have been completely transformed to the opposite gender, providing anecdotal evidence at least that this gender change can be bi-directional.

-Kristy Dean  
(Kristy)

# EYE ON IT

## Species Spotlight

The Maldives Lyretail Anthias is also known as the Scalefin. The males have reddish hues, while the females tend to be more orange. They are active and help to draw out shier fish that share the tank with them.

The Maldives Lyretail Anthias does best when kept in a species-specific tank of at least 125-gallons for a group. Males are best kept alone with several females, or singly.



The Anthias dwells in the middle of a tank but appreciates the availability of several hiding places.

Anthias species all share the trait of being hermaphroditic. If a dominant male perishes, the largest female of the group will often morph to take its place.

The diet is consistent with other members of the Anthias group - zooplankton and floating filamentous algae. In the aquarium, it should be fed a varied diet of mysis shrimp, vitamin-enriched brine shrimp, frozen preparations and other meaty items for zooplankton feeders. They prefer to be fed small quantities, several times daily.

**Information/Photos were compiled with permission from [www.liveaquaria.com](http://www.liveaquaria.com).**



## Upcoming Events:

### April 10, 2010

**San Antonio Zoo Event**  
6pm-10pm  
After hours zoo access, Guided tour of Aquarium by zookeeper, Dinner in banquet hall

### May 22, 2010

**Feeding your reef:**  
"How to grow your own phyto, artemi, and rotifers"  
Presented by: Ace Shedd  
1pm-3pm  
Madison High School, San Antonio, TX

### June 2010

TBA

### July 23-25, 2010

**Port Aransas Collection Trip**  
Speakers & Times TBA  
Port Aransas, TX



## This Month's Aquaria Q&A ...

### Question:

I'm having major plumbing issues, and I have to shut down my filtration temporarily! How long can my tank last?

### Answer:

Assuming you have wisely built your aquarium, you likely have a decent amount of live rock and other sources of circulation within your display tank. Simply keep the water moving, and keep an eye here -- chances are this can be maintained indefinitely without great deleterious effects. If you are concerned about waste buildup, step up the frequency of water changes during the time your filtration is down: 2-3 small (5 gallon or less, depending on water volume) water changes per week will be a huge benefit. Water disturbing the surface will also help to allow gas exchange to continue to occur effectively.



Justin Norman (aka) Corruption

# BECOME A CHARTER MEMBER TODAY

## Membership

Dues are \$25 for the calendar year. These dues quickly pay for themselves by the discounts given that many local stores honor to MAAST members.

We are trying to make our club better, bringing more educational topics, more door prizes and raffle items, and guest speakers. We also have the routine maintenance items like the website, food for meetings, membership dues to national marine organizations, and print/publication fee's. Membership dues allow our club to keep afloat and make all of this possible. As always, the website portion of the club will remain free.

Why collect dues?

1. Keeps MAAST afloat.
2. Funds club meetings so host does not have to pay for all out of pocket.
3. Allows for an image gallery on MAAST website.
4. Extra funds go into pool for "expert" speakers at the meetings.
5. Higher quality raffles, higher quality meetings, higher quality club!
6. Eligibility to run for a club office or be appointed to a committee.
7. Eligibility to VOTE!
8. Discounts at participating LFS's and online vendors.
9. A membership card
10. A voice to represent aquarists' interest.

For more information concerning Charter status, please read our By-Laws.

The membership dues are \$25.00. Payment can be made either at the meetings, online via PayPal, or with a check mailed to our PO Box below

PayPal fee's can be sent to [treasurer@maast.org](mailto:treasurer@maast.org)

or via snail mail to:  
MAAST  
P. O. Box 780582  
San Antonio, TX 78278

Please include name, sign-in name, e-mail, home address, and phone!

*Thanks for everyones help and support with this great organization!*



### PHOTO CREDITS

P2 - POTM Winner- stone-roller

P1 - HoppyBunny- Anthias pair

P2 - POTM Winner- stone-roller

P3 - Kristy- Anthias photo

P4 - Kristy - Anthias photos

P4- ChunkyMonkey- Cleaner Shrimp

P4- Hobogato- Purple Carpet

P6 - HoppyBunny- Dendro

P6- Anthing - Pennies2Cents - RBTA & Zoa

P7 - cbianco: Nano Tank