

**OVAS Chat Event – “Ask an Expert”**  
**Planted Tanks**  
November 1, 2006

*The Chat event was moderated by OVAS executive member **PaleoFishGirl**.*

*The chat transcript was reformatted by **kyonis**.*

*All answers for member's questions were provided by our “Ask an Expert” guests*

**Jetstream**, **BigDaddy**, and **Toss**. (Different colors used for different expert's comments/answers)

**PaleoFishGirl** : I'd like to welcome BigDaddy and Jetstream to the room and thank them for agreeing to be our Planted Tank Experts. Toss will be joining at a later time.

**Can you talk quickly about different style ?**

Basically I guess there are 2 basic styles. Dutch style and so call Amano natural style.

**What is the difference between the two?**

both normally have very min. number of fishes in the tank. Amano uses fewer species of plants with rocks and wood, whereas a Dutch tank will be planted with a large and varied group of species. Amano style tanks don't HAVE to have few fish... but most don't. Amano style tanks have a specific look, for example a clear glass aquarium with no trim around it and an open top.... Dutch style aquariums, by their definition, have few fish and lots of plants. However, I heard that in the open competition, the judge would deduce points if you have more than 3 types of plants in 12 sq inches. for the Dutch style tank I mean.

**Which style is best to start ? I mean for a newbie in plant like me for example?**

style depends on your own. You can start with low light to med light planted tank. Easy and more room for we errors. It allows you to understand how the plants, lights and fertilizers interact.

**I read many time that acidic water is better for plant and you have the advantage if the tank is acidic.**

The CO2 will drive pH down anyway. You can grow many plants in somewhat acidic waters... but that isn't always true in very hard water... You don't want to have your water TOO acidic... as the plants do need some calcium and magnesium and carbonates which will all contribute to gH and kH, and thus pH. So, a breeding apisto tank with a pH of 4.5 might not be an ideal place for some plants

I got a tank with PH between 4 and 5 average, and I have multiple problems with lot of plants, with some other specie they grow like bad grass

**What is a good way to add calcium to the water?**

Two things I have used. Calcium carbonate - which dissolves okay in a CO2 injected tank, and now I am using Gypsum - Calcium Sulfate. I use Calcium Carbonate too which dissolves much more easily than CaCO3. Both can be purchased at wine and beer making stores for very little. I think I pay 50 cents for a "prescription bottle" of gypsum which will last a couple of months. There are resources on the web to determine how much to dose based on your tank size.

### **What are Tonina plants?**

It's from South America. Tonina and Erialon prefer strong acidic water

### **What type of substrate do you use for your tanks?**

For my tanks, I use pool-filtering sand, soil condition and I added root tabs, laterite soil conditioner

My high light and medium light tanks all use Seachem Flourish.... I also have used "natural gravel" and some sands. I have used Estes gravel with a laterite base in the past too.

### **When it comes to lighting and plants, what type of lights, fixtures, and wattage should a newbie consider?**

I actually recommend that newbies start with either a low or medium light tank.... to get their feet wet and to stop them from spending tons of money on high light, co2 etc. only to get frustrated. Double light strip hoods for most tanks will give someone a good start at a low to medium light tank

High light plants will survive in low light tank but they just survive and won't show their potential at all I will recommend get ready for med-high setup. you will have much more choice and save a bit of money later on.

### **Do you think it is a must to have CO2 to have a nice planted tank?**

No. Not a must!

No way... some of the nicer tanks I have seen have been medium light. Minimal algae issues, low maintenance... CO2 is a benefit to plants.... but it is not a requirement if you stay below certain light levels.

**I've recently set up several African tanks and I have obtained a lot of mature Java Fern. Lighting is a single 24w T5HO with Reflector over a 40gallon Breeder (15" high). Right now, I just want to utilize this (supposedly) simple plant, but I want them to remain green and good looking. I just got 25 plants on the weekend, and want to plant them this week (most are just floating under light right now). Recommendations for planting and any supplements?**

Give them a bit more light, in low light levels they will turn brown

A single 24-watt HO puts out about the same light energy as two NO T8 bulbs...give or take. Make sure the rhizomes have good water circulation to avoid rot. I found that with lower lighting level, their leaves stay small. And if your water is at least gH and kH 3, you'll have enough nutrients in the water to maintain them.

**Can I simply half-bury them, or would it be better to fish-line them?**

You can't bury the rhizome. Only the root hairs...

your African will dig them up anyway! :)

If the rhizome isn't exposed to current, it will rot and the plant will die. I have even had a java fern die because I couldn't get all the rock wool out from between the roots before I tied it down.

**How long does it take them to adhere if tied?**

It depends. Its hard to give a solid answer to your question

2 to 3 months. More if they are getting disturbed often. But once they do grab on... You will be able to lift the rock/wood by the plant first

**Ok Tags that describe plants are they accurate? To me there seems a large leeway?**

You can use them as a guideline. Of course, there are still some exceptions.

They are a good starting point. But subjective Tropica uses a number system I still haven't totally figured out LOL. Best thing is to do your own research, or ask someone else who keeps the plant you are considering.

**At your point of view what is the best size to start a nice planted tank? is easier with big volume , or still feasible with small volume ?**

Small tanks are tricky for planting. The "WPG rule" doesn't work on them and it is hard to get good lighting over them. Plus, not a lot of room for error. A good tank is a larger tank that isn't tall.

20 gallon or 40 gallon longs are great starter tanks. You can get good plant growth even with the standard hood for them since there isn't a lot of water to penetrate.

Stay away from tanks over 24 inches high to start. 12 to 18 inches high is manageable

**When using CO2, other than monitoring your pH levels can you detect the amount of CO2 in your tank? How can you tell if you are giving too much or not enough?**

I only test my water once a while now. Too much is easy to tell, the fish will be in distress... gasping at the surface.

plecos are good CO2 detectors.... they don't react well to overdoses and it is clear to see

They can survive very high CO2 levels

**What if you don't have any fish?**

then will be much easier. Then you can't really have too much

There's a point where the plants just can use anymore of the CO2.  
If not enough CO2... assuming your fertilizers are okay, your plants won't "pearl". CO2 is the single biggest limiting factor in a high light tank. And the one that causes 90 percent of algae issues.  
CO2 is the biggest nutrient people don't get right

**Are there test strips for CO2, or how do you check?**

There are 2 methods: pH and kH table. or over night 1 degree drops method! :)  
Another way is to use your eye as your judgment tool.  
if you are injecting CO2 you need to up your kH a bit to keep the pH stable....  
When you see little bubbles coming out from the edge of the leaves...they are cooking.  
Bubbles on leaves are good, it means they are Pearling. enough CO2 in the water that the plant cook the food and generate O2. I use my riccia as indicator.

**Define "pearl" please.**

O2 appears on the leaves  
The oxygen bubbles look like tiny pearls under the leaves.....

**Can you tell us what type of cycle you use for lights on , off, and co2 off?**

My lights are 12 on and 12 off, and the same for CO2  
I keep my tanks light on approx 10 hours  
Currently my CO2 and lights go on at the same time... but I may change it to have the CO2 on 1 hour earlier than lights.  
My CO2 on 1 hour before and off 1 hour ahead of the lights.

**Why we have to avoid fish in planted tanks?**

You don't...  
You don't need to avoid fish in a planted tank just people put min.  
For example, I have a 75 G that is well planted and I have 9 apistos, 18 pencilfish and 3 bushynose... not exactly a Low Fish Tank. Its just that plants become such a focal point, people don't want a lot of fish obstructing the view of their plants!

**What is your favorite plant, experts?**

All of the plants are my favorite plants

**I don't think this has been covered already but forgive me if it has. I recently lost a GBR, could it be from low pH in the morning, as I left my CO2 on 24/7. Has this happened to anyone else? Is it really that big a no-no?**

If the ph changes slowly, they should be ok unless you dose your CO2 to very extreme. If they start looking pale...means they don't like the water

German blue rams are a bit like discus, they don't like extreme changes. But if your pH is swinging gradually over a 24 hour period... as Jetstream says, it shouldn't be an issue I've kept rams in a high light heavily CO2 injected tank and been fine....

**Are there any fish or other creatures to avoid in a heavily planted tank?**

Avoid large size fishes, that's what I will say!

some species of snails....

goldfish

and don't keep SAE with moss or riccia... they will graze down your riccia in minutes they like to nibble on it and not eating the algae. Easier food for them! :(

**Are there test kits to measure Potassium in the water? I mean for a K test kit**

Too expensive, and overdose of K won't cause you any problem

Its called a turbidity test, and it is pretty expensive for an accurate one

**Is there a plant that will survive Shellie-type conditions? High pH, and hard water?**

Crypt will survive high ph

African ferns, anubias

anubias and java fern

vals should do okay

I will say over 50% of the Crypt will survive high ph except some exotic ones

**What are your thoughts on substrate heating? Does it help stabilize planted tanks over the long term?**

Substrate heating cable is nice but not necessary.

Substrate heaters just provide more flow through the substrate. Aerate the substrate through convection. Malaysian Trumpet Snail (MTS) are a much cheaper solution

**Has anyone used glycerin in their CO2 bubble counter, & are there any negative effects.**

Nope. I've heard of people using mineral oil... no problems there...

it shouldn't cause you any trouble from what I know. it just stop the evaporation on the tube! if you use tap water, you see all the condensation above your counter.

**Green algae and brown algae on leaves, does that significantly block light the same as in houseplants?**

Depends on the plant. Fine leaved plants will be harder hit by algae on their surfaces than something like anubias for example. Blue-Green Algae (BGA) will smother some plants... but others can still survive for months covered in it. Spoken from experience!

LOL

**What could cause plant leaves to fall apart? 3 w/gal, CO2... Banana plants, chain swords, for example.**

lots of things will cause the leaves fall apart. Maybe some plants are blocking others, lots of time is the lighting level or Nitrogen. (In planted tanks, nitrate. usually too low) or during transition to submersed grow most of the plants that you buy from LFS store are grow immersed when you put them in your tank, all the old leaves will fall off. and the new leaves will come out slowly in submersed form. Very common with stem plants. Some plants loss their leave because the water is too warm for them.

**It is said that lower nitrates will bring out more red in red plants, how does this work.**

Yes, but I forgot the pigments name inside the plants

Same here

I will try to find out when I get home later on

But it is true... high nitrate and sunset hygro will grow in completely green with white veins, lower the nitrates, and it will go pink to almost purple

It's not the iron that brings out the red. it's a myth! The common myth is that red plants need lots of iron

**How many WPG for pennywort? Is 3 enough?**

Next to none if it is floating

3 is more than enough

**Enough for vals, too? My vals are looking mangy.**

I find a lot of times with vals, they don't like transplanting shock so the original vals die off... but the runners do great.

I found that my vals need a bit more light to do well

And don't use Seachem Excel with Vals

**Is fertilizer / trace elements necessary?**

At higher lighting levels, definitely

It's hard to give you an solid answer on this one

Different people have different ideas on what traces are. Traces are things like boron, zinc, etc..... trace elements are a good thing... but only if you have your macros down.

**I have a small tank with a severe case of BGA. I tried the blackout method, but stopped after 3 days instead of 5. My plants took a beating and the BGA came back. Do you think the plants could withstand a 5 day blackout?**

If they are healthy to start with.

They should be fine

BGA usually comes from a lack of nitrate... so when you do your blackout... add some nitrate if you can. Then once it is gone... make sure you always have some nitrate in your tank....

CO2 + trimming affected leaves killed my BGA... if I am permitted to share my experience :)

**Is nitrate okay with shrimp??**

Only at low level, but it depends on what kind of shrimps too

**Does it matter if you dose macro & micro @ the same time? How often should one dose?**

Nope. I just do it on opposite days so that I'm always putting something in the tank everyday to remind myself....

Macros day one, Traces 2, Macros 3, Traces 4, etc.....

I do mine on different days too

**Have you ever succeeded on propagating banana plant?**

I have never kept banana plants

**How often should one dose t/m elements? Daily?**

Depends on your dosages and how much your plants uptake

Myself, I do it every water change. However, too much will go to algae so start small and keep increasing till you see algae growing

Tom Barr has something he calls "The Estimative Index". If you google it, it will give you some good pointers.