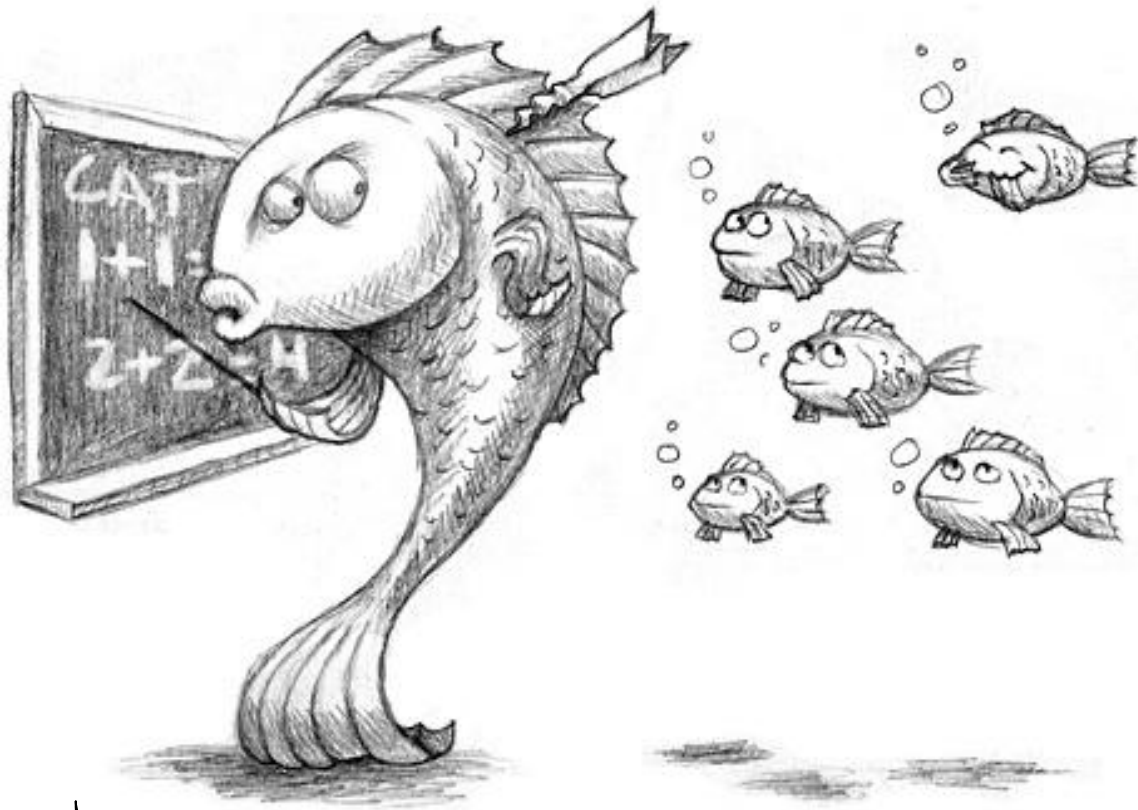


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# B.R.A.S.S.

Barrie Region Aquarium Society of Simcoe



# Bulletin

**NEXT MEETING**  
**SEPTEMBER 11, 2012**  
**7:00PM - 9:00PM**  
**MAPLE GROVE PUBLIC**  
**SCHOOL**

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# The Mail Bag

## From the Desk of the President

Well here we are ready to start off a new year with BRASS. Hope everyone has enjoyed the summer. We had talked about maybe having a fish auction in the fall so I approached the school board for a price and was told it would be close to \$1000.00 to which I said no thanks. Randy is getting us a price from his union hall.

We are asking for pictures for the September meeting. Hopefully you received an email about it and are able to get those to Jeff. It should be fun and enlightening to see everyone's tank.

We went on our Toronto tour of fish stores back in July. I had a great time as did most I believe. We hit more stores than we had first planned, but not as many as we later planned, but it was a full day and we were in great company. Saw a lot, learned a little and have found places that will probably be regular shopping trips when looking for something.

Daniel at Aquatic Kingdom has offered us 20 % on the week of our meetings to club members. Johnny at another store, Gold Ocean I believe, has offered us a 40% discount on fish for BRASS. members.

On a personal note, I went from not having and never owning a marine tank at the last meeting to now having a 40 gal. with 20 gal. sump and a 120 gal. with 40 gal. sump. Been learning a lot and really enjoying it.

Looking forward to the September meeting, see you there.

Doug Smith



## Blurb from the Editor

Another summer has come and gone, and the kids are back in school. In my head I am singing "It's the most wonderful time of the year"!

Our summer has been rather quiet this year; however, Doug did manage to purchase a couple of tanks and some supplies.

The last number of weeks we have been helping dear friends of ours build a stand and set up a huge tank in their home. Lots of fun has been had by all.

I hope you all had a great couple of months and I look forward to hearing what new and exciting things you have added to your collections.

Please note that at our meeting I will be providing you with a list of Fish Stores who hosted us during our tour and have offered us discounts.

Kara Fleming

# Secretary's Report

The BRASS meeting of June 12 had 16 people present with 3 new members. Welcome to Udo, Taylor and Gavin. Bonnie read the minutes from last meeting. We had a report on our participation in the Reptile Show and Auction in May. We showed off our new banner. We were pleased with our booth, it looked professional, bright, had aquariums with fish and a slide show of our members fish. Randy and Sherry set up a really nice Cichlid tank, Doug Fleming sent a planted tank that a lot of people had to stop and look at. There was a lot of people through the show that day, it was amazing to see so many. The Auction went on most of the day, it was a good day for buying! The prices were quite low, not good if you were selling but great if buying! Randy went with 30 fish to show and came home with 140! Doug Smith came home with about 17 to 20 and 3 lizards!

We had a long discussion on the feasibility of our club putting on an auction. It is something that our President has wanted to do, but our membership is so low, could we pull it off? Udo has run many auctions so knows his way around the process, he has offered to help and agreed to be the Auctioneer. We would have to advertise; e mails, Kijiji, free ads in papers Get sponsorships, provide a source of food and drinks as income for club. Randy is going to check his union hall for price. We are all to check out places and prices.

Randy and Sherry have a couple of events coming up in their area they are going to promote the club, Pentang pet shop expo and Midland Sidewalk Sale. They have our new Banner to get our name out there. Udo suggested when we do things like this we should have a free draw, something from our donation box, 10 gallon tank, or even 6 cases of coke, just something so we get their name, address, phone number and e-mail address to add to our data base. Sherry will get our Vector and send it to Doug.

We held Elections, your executive for the coming year:

- President Doug Smith,
- Vice President Doug Fleming
- Secretary Bonnie
- Treasurer Bonnie
- Editor Kara
- Program Coordinator Jeff Mountjoy
- Library Jeff Mountjoy
- Raffle Coordinator Randy Lepage
- Web Master Gavin Steiner

## Executives

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Web Master	Gavin Steiner	

# How to grow & care for aquarium plants

<http://www.aquaticcommunity.com/plants/grow.php>

## Lighting

Different plant species have different requirements when it comes to lighting, and researching the species you are interested in is therefore really important. Many aquarists claim that planted aquariums are really difficult to keep, since they purchase plants that look good without putting any effort into learning how these plants should be cared for. It is not hard to understand why these plants rapidly wilt and die in the aquarium, and why the aquarist believes that planted aquariums are "impossible" to keep.

### Strength

As a rule of thumb, planted aquariums should get 0.5-1.0 watt of fluorescent light per liter of water. Generally speaking, a 50 liter aquarium with standard dimensions will therefore require 0.5 watts x 50 = 25 watts. This rule has to be modified if you keep really high demanding or low demanding species, if your aquarium is very deep, or if your aquarium is really densely planted.

### Incandescent or fluorescent?

Incandescent lighting is still quite common, especially among beginners. There are many low demanding plant species that will do well with nothing but incandescent lights, but the problem is that incandescent lights tend to become really warm. This will affect the water temperature in your aquarium. Incandescent lights also consume a lot of energy and do not last very long. Investing in fluorescent lights can therefore save you money in the long run.

### Color temperatures

When purchasing fluorescent lights from a well stocked lamp store, you may stumble over a wide range of different color temperatures. Different color temperatures are good for different purposes. If you are a novice plant keeper, stick to bluish (white) and yellow (warm) lamps.

### Day length

Try to mimic the natural day length in the environment from which your plants hail. Many popular aquarium plants are tropical species and are therefore used to 12 hours of light per day. If you keep temperate species, give them at least 14 hours of light each day during the summer and no more than 10 hours per day during the winter. Keeping the lights on 24/7 will only aid algae growth and may also disturb your fish.

## Carbon Dioxide (CO2)

Without carbon dioxide, plants cannot perform photosynthesis, the process where they turn light energy into energy that they can use (sugars). Most plants will do well with the carbon dioxide produced by breathing fish and other animals in the aquarium, but there are of course exceptions. Some aquarists use CO2 injections to promote plant growth. This can produce wonderful results when balanced with sufficient lighting and necessary nutrients. Even plants that would survive without any additional CO2 can start growing much more rapidly when they receive extra CO2. CO2 can come from fermentation or from a gas cylinder filled with liquid CO2.

### Fermentation

Producing CO2 through fermentation is actually quite straightforward and can be carried out even by aquarists on a limited budget.

1. You will need a 1.5-2.0 liter plastic bottle.
2. Poke a hole in the cap and let an airline tube run through it. (The attachment must be airtight.) The airline should ideally have a non-return valve.
3. Fill half of the bottle with water.
4. Shake in ½ cup of sugar and ½ teaspoon of baking yeast.
5. Secure the cap and wait for the fermentation process to start. It should be up and running in no time, just like when you bake a loaf of bread.
6. When gas starts to evaporate through the airline, attach an air stone to the tube and place it in the aquarium.
7. The fermentation process will normally provide the aquarium with plenty of carbon dioxide for at least two weeks.

## Nutrients

Just like terrestrial plants, you aquarium plants need nutrients to survive.

**Macro nutrients:** Nitrogen, Phosphate, Potassium

**Other nutrients:** Boron, Iron, Nickel, Zinc

In addition to the elements mentioned above, plants need trace elements of many other elements as well. If you fail to provide your plants with all necessary nutrients, it can lead to stunted growth, yellow leaves or even prove fatal. So, how can nutrients enter the aquarium?

- Nutrients are present in tap water and well water.
- Nutrients are present in fish food (and will therefore also be excreted by fish).
- Nutrients are present in potting soil and aquarium substrate.
- You can purchase special fertilizers intended for aquarium use.

Before you decide on using fertilizers, keep in mind that simply filling your aquarium with a lot of fertilizers will not aid plant growth. Fertilization must always be balanced with light and carbon dioxide. It is also very important to purchase a special aquarium fertilizer, since fertilizers for terrestrial plants contain too much nitrogen which will cause algae growth and injure the fish.

## Substrate

Some aquarium plants must be planted in the substrate or in pots, while others grow attached to rocks, driftwood etcetera. There are also floating plants and plants that can grow in several different fashions. If you want to keep plant species that need a substrate to grow in, ideally chose a substrate where the particles are 1.5-3.0 mm. There are naturally exceptions to this rule, but many plant species can not tolerate finer substrates since their roots cannot handle anaerobic conditions well. When the particles are 1.5 mm or bigger, it is easier for water to circulate which prevents clogging.

When it comes to substrate depth, the requirements vary a lot from species to species. The popular Amazon Sword (*Echinodorus bleheri*) will for instance grow quite big and need to be rooted in at least 8 cm of substrate.

## Preventing disease

- Only buy plants that look healthy.
- Do not buy plants from aquariums where the fish seem unhealthy. Plants can carry malicious microorganisms and infect your fishes.
- If you want to be even safer, sterilize the plants before you place them in your aquarium. You can for instance use a dilute solution of potassium permanganate (provided that you have plant and fish species that can handle traces of potassium permanganate). Keeping a plant in potassium permanganate for 10-15 minutes will kill most malevolent microorganisms.
- Remove all damaged leaves before planting. It is better to remove a lot of leaves than allow them to decay and pollute the water.
- Do not panic if most leaves die, turn yellow or dissolve after planting. The shock of being repotted can make plants lose their leaves, but they will grow new ones.

# Safe Rock and Wood Aquascaping

<http://www.aquaticcommunity.com/aquarium/aquascaping.php>

An aquarium without decoration seldom looks good and there are numerous ways to decorate or "aquascape" your aquarium. Some prefer to use unnatural decorations using plastic plants and sunken plastic ships, divers and treasure chests, other prefer a more natural feel. This article will focus on the later but everything you learn in this equally true if you choose to decorate an unnatural aquarium. Especially if you don't buy all the decorations in a pet store but also use decorations you found or made yourself. Before allowing anything to enter your aquarium, it is very important to make sure that it is safe for aquarium use. Never use anything without knowing for sure that it is safe. There are numerous reasons to why a piece of decoration can be none aquarium safe and that therefore not are to be used in aquascaping and there are some decorations that only are suitable in certain types of aquariums as they affect water values.

To be completely aquarium safe a piece of aquarium decoration should be non toxic and not affect the water chemistry or physics in any way. If a decoration affects the water chemistry or physics it can still be a good in certain aquariums where the effect they have are positive. Lime stone decorations are as an example beneficial in the aquascaping in an Lake Malawi aquarium as it helps buffer the high pH. The same effect would be very damaging in a discus or other low pH soft water aquarium.

Today there are a lot of ways to very exactly measure the existence of just about any chemical compound. These methods are however only seldom available to the aquarist and aquarists have to make sure that the decoration they use are safe in more primitive ways. There are simple ways to check for certain quality in a piece of decoration such as pouring a drop or two of vinegar on a piece of decoration to test for the present of chalk. It will start to bubble if there are chalk present. (Chalk raises pH). These easy methods usually only checks for the presence of certain compound and will therefore not guarantee that the tested decoration is safe. The easiest way to test for "all" possible dangers is test using the decoration in an aquarium with "guinea pig" fish. Make sure to use same type of water that you are going to use in your aquarium in the test aquarium and boil the decoration before putting it in the test setup. If the fish seems healthy and happy after 2-3 weeks in the test setup and the water parameters remain the same during the test period it usually means that the piece of decoration is safe. At least in a setup similar to the test setup. It should however be noted that this method isn't 100% safe unless a considerable longer test period is used. 2-3 weeks are enough to make the findings reasonable reliable. Be sure not to use a too hardy species in the test as it might survive and thrive in conditions that would kill the fish you plan to have in the aquarium in question.

Early in this article I said that I was going to focus on natural ways to decorate your aquarium and this primarily mean aquascaping the aquarium using roots, rocks and plants even if other things such as leaves sometimes are used. I will not say anything about that as that is an entirely different topic but it can be good to know that some plants are toxic and not suitable to be used in aquariums. Even some plants sold in pet stores are can release toxins if broken and should therefore not be used.

There are 3 main sources of the roots and rocks needed for your aquascaping.

Pet stores

Other stores

In the wild

Many people will tell you that the decorations attained in the pet stores are safe and that the risks raises the further down the list you go. I.e. that the risks of getting toxic or otherwise unsuitable is the largest with roots or stones collected in the wild. The truth is however not that simple. You can not be sure that everything you can buy in the pet store is aquarium safe and you should preferable test every piece of decoration you get regardless of where you get them. There is as an example a lot of decoration that affects the pH of your water in your local pet shop. It is worth remembering that even if a product have been sealed to make it non reactive with your water the seal might brake and the decoration start leaking toxins or affect your water.

It is true that roots or rocks collected in the wild are more likely to cause you problem than the counterpart from the zoo regardless of how you treat the roots and rocks. You should however despite this take the same precautions regardless of the source of the decoration as the risk is present regardless of source.

Things and especially wood found under water is often referred to as safer as and more suitable for aquariums than things found on land. This might be true but they are still not guaranteed to be safe and should still be tested. I benefit of wood found under water is that it usually is waterlogged and sinks. Dry wood often has lower density and the water and need to be kept in place artificially to prevent it from floating up.

Some roots, rocks or other decorations can be unsuitable for an aquarium even if they are totally no reactive with the water in your aquarium. This is as example the case with very sharp rocks as sharp rocks can hurt your fish.

When you finally have found your aquarium decorations you need to put together you aquascaping and it is than important to remember that the aquarium decoration shouldn't only be beautiful but also offer the fish an environment they thrive in. The aquascaping should allow the fish the possibility to form territories, to hide and find shelter, to find suitable breeding grounds and to show any other behavior the fish species in question might have.

There are many ways to create a beautiful aquarium but there are some tips that can be good to try and remember. Avoid symmetry. Nature is chaos and a too neatly ordered aquarium will look strange. Try to great a few natural focus points in the aquariums and try to create contrast between areas next to each other in the aquarium, Plant narrow leafed plants next to round leafed plants etc. Think through the aquascaping before getting started and try to stick to the intended plan and the thought behind it as much as possible.

