Wasatch Marine Aquarium Society
SEA STAR

Issue 3 March 2007

Maintaining the Maintenance

By: Shane Silcox

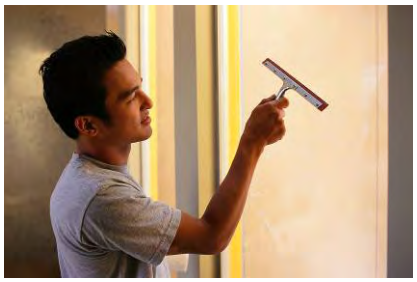
If you ask four reefers how they perform maintenance on their aquariums, you will inevitably get five different answers. The options for maintaining a saltwater aquarium are about as diverse as the aquariums that are being maintained. In this article we'll discuss the important factors to remember in creating your own custom maintenance schedule.

First - Keep things organized

You aren't going to be performing much maintenance on a sump when you can't even see past the test kits, food, electrical wires, and stale bags left over from the fish you bought last week. It is important not only for ease of cleaning - but for safety as well. Tie up and organize electric cords so they don't end up in the tank. Throw out any unnecessary junk that may be collecting in your stand. Remember - a happy tank is an organized tank.

Second - Keep things clean

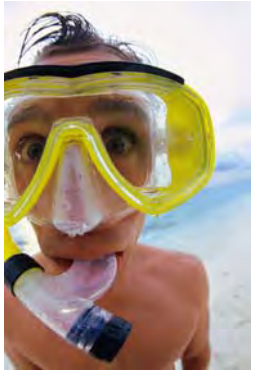
Unless you enjoy green algae more than looking at pretty coral (Ahem... Adam) you should be scraping your glass at least once a week. This will prevent the algae from building up on the glass to the point where it is difficult to remove. Trust me - it is easier to do this once a week than spending a couple hours doing it once a month. Don't forget to get the corners - they are infamous for accumulating "missed" spots.



Also – you won't typically notice it gradually over time – but that salt creep on the lenses of your lighting can really build up, blocking a significant amount of light from getting to your tank. At night (after your lights are off – DO NOT do this when your glass is still hot) thoroughly clean the lens on your lighting. This will help you get all your precious dollars spent on electricity out of your lighting.

Third - Don't 'dis' your plumbing

A little fiber in your diet is necessary to keep your plumbing running at tip top shape – so should a little maintenance on your tank plumbing be done to keep it running in top shape. This is a place often overlooked by hobbyists, as it is sometimes a difficult task. However – your tank relies on water movement to keep corals fed and water oxygenated (among many other things), so don't skip it. Once a month – clean your pumps and powerheads. Check your plumbing for blockages. Clean out your overflows. You may be amazed at how much flow can be restricted due to clogged plumbing.



Fourth – Change is a good thing… really

If left to its own devices – your tank will gladly accumulate everything put into it. Food, additives – and at my house – hotwheels cars. Weekly, biweekly, monthly (or for some of you) yearly water changes are an important aspect of a healthy reef tank. Changing your water often will remove the built up nitrates and other gunk that your tank has been holding on to since your last water change. To quote Anthony Calfo, "*The solution to pollution is dilution*". Also, this is a good time to harvest your macroalgae from your sump. This is another excellent way to export nutrients from your tank, as macroalgae uptakes a significant amount during growth. Remember – to keep things balanced - everything that you put into your tank must come back out somehow.

While we discuss changing things, this is also a good time to check your filter media/cartridges. If they have become caked with algae and other nastiness, you can lightly (LIGHTLY!) rinse with

Inside This Edition

*****Special Thanks to the folks above for putting the time and effort into each article. Your hard work made this issue possible.*****

‼Please email me if you have article suggestions or if you would like to contribute: sukie80@gmail.com‼

saltwater to remove the caked on material. Note – if this is your main filtration method in your tank, i.e. Bio-Wheel, it is important that you use saltwater to clean it.
If you use a filter sock, you can wash it in your clothes washer with a little bit of bleach. Once finished, let it dry in the sun. The bleach will quickly break down in a couple hours and the sock will be ready for use.

Fifth – Just watch
The absolute best maintenance is observation. You know your fish and coral better than anyone. Is Dory looking a little pale? Is Nemo not eating like he usually does? Does your waterflow seem a little weak today? These are sometimes signs of problems. A good reefkeeper is a keen observer. This is the easiest maintenance anyway – you already spend eight hours a day in front of your tank.

Sixth – The rest of the stuff that wouldn't fit into a catchy subtitle
Dosing. This is entirely tank-dependant. Many people never put a drop of anything into their tank, and have great success. Others have such a high calcium load they are dumping cups of calcium in a day. Your tank will require special handling. Just remember though, if it isn't broke – don't fix it.
Feed your fish. This is probably one of those important daily maintenance tasks that shouldn't be missed.
Even if you use a flashlight to light your tank, there is going to be evaporation. You can either manually top off the evaporated water by hand each day, or else setup an auto top off system to do it for you. I highly recommend the latter.
Water testing. Again, this is dependant on the hobbyist. Many test religiously every week, others only test when a problem occurs. I recommend monthly water tests, just to make sure things are running swimmingly (pun intended).

In conclusion, spending a little time each week maintaining your tank is significantly better than hours spent after the fact trying to solve a problem – which could have been prevented in the first place. Your tank will thank you.

Feeding A Reef
-Presidency

Join us for an awesome meeting! Back by popular demand for the third time. Two of our very own will entertain and enlighten you.... or at least get messy in front of you. This month Adam Blundell and Jake Pehrson will once again explain everything you need to know about foods for your aquarium. Cyclopeeze, shrimp, nori, oyster, squid, carrots, peas, potatoes, krill, bloodworms, Big Macs, vitamins, garlic, who knows what will be on the menu. But to learn about proper foods and feeding techniques join us for a night of fun.

Food Drive
Learn to feed your reef – help to feed the less fortunate. The WMAS will be raffling all the food prepared during the "Feed Your Reef" demonstration as well as an Iwaki pump to help keep it all suspended! Raffle tickets can be purchased for the regular $1 price OR exchange each nonperishable food item for 1 raffle ticket. Collected food will be donated to the Utah Food Bank.

UTAH FOOD BANK
SERVICES

Raising Anemonefish - Part 2
By Amie

Last month, I covered the process of raising rotifers, which is the first step in raising anemonefish. This month, I want to cover how to hatch brineshrimp since this is the next important food source for the anemonefish. Next month, I will put this all together and explain how to raise anemonefish.

Since I can not describe every detail necessary to raise anemonefish in just a few short articles, I would like to again stress the importance of getting the book "***Clownfish***" by Joyce D. Wilkerson. I would also like to refer you to Suzy's webpage www.swplantedtank.com. She has great ideas and has taught me almost everything I know about raising live food.

Things you need to hatch Artemia Nauplii (or baby brineshrimp)

1) 2-liter bottle
2) air pump
3) airline hose
4) a valve to control the flow of air
5) brineshrimp eggs – regular or decapsulated
6) A light source - just about any light will work. I use a flourescent bulb to save energy.
7) salt water from the clownfish larvae tank
8) brineshrimp seive or coffee filter

***Step 1*:** Cut a 2-liter bottle in half as shown

***Step 2*:** Assemble container. Fill the bottom half of the container about half way full with tap water - (This section of the container will never touch the nauplii (brineshrimp larvae), it will only be used as a weight for the top half.) Adding hot water to the bottom section will speed up the hatching process. With the lid on tight, turn the top half of the liter bottle upside down and push it down into the bottom half of the bottle.

***Step 3*:** Add water. Add salt water from your clownfish larvae tank to the top section of the bottle. Fill it about half way to the top.

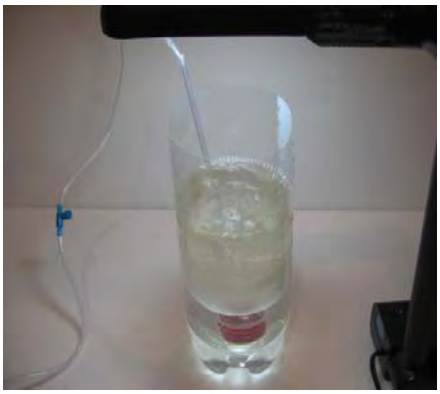
***Step 4*:** Add Eggs. Add about 1/8 – 1/4 tsp. of decapsulated eggs to the water. These can be either purchased or you can decapsulate them yourself.

2 liter bottle, bottom half filled with hot tap water and top half inverted and filled with tank water.

Decapsulating Brineshrimp Eggs

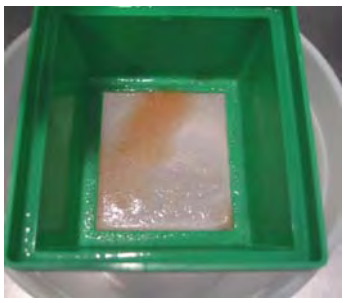
If you do not use decapsulated eggs, the shells will remain in the water after the nauplii have hatched. This is okay if you are using the nauplii for your reef tank because you can syphon out most of the nauplii without the shells. But if you are using the nauplii to feed clownfish larvae, you can not risk even one shell getting into the gullet of a clownfish larvae. So it is necessary to either decapsulate the eggs or buy decapsulated eggs. It is not hard to decapsulate your own eggs, it simply means that you are going to 'burn off' the shells before hatching the eggs. This can be done by soaking the eggs in 3 tablespoons of water for 60 minutes in order to hydrate the eggs. Then, add 1 tablespoon chlorox bleach and stir constantly for 2-3 minutes. The eggs will turn from brown to grey to orange. Once they are orange, the process is complete. Rince the eggs off thouroughly through a sieve or coffee strainer. Set the strainer, with the eggs, in a bowl and add enough dechlorinated water (or RO water) to completely cover the eggs. Add a drop of dechlorinator and let them sit in this water for 2-3 minutes. This will eliminate any remaining chlorox. Now, add the eggs to the top of the 2 liter bottle.

***Step 5*:** Add Air. Place the airline hose into the top section and ensure that the hose sits at the lowest point in the bottle cap. Start the air pump and set the bubbles to a 'boil' so the eggs will stay in suspension but not so hard that they bubble out of the container.



***Step 6*:** Add Light. Add a light and wait about 24-48 hours depending on your light, the heat of the water and the age of the eggs.

***Step 7*:** Check for nauplii. The nauplii are so small that the best way to tell if they have hatched is to turn off the air and wait about 30 seconds. The nauplii will swim to the side of the container that has the most light - so you will see a grouping of orange color on one side of the container. If this doesn't happen, return the light to the container, and check it again in 4-8 hours.



Step 8: Collect the nauplii in a sieve. Place it in the sink or over a container and pour clean dechlorinated water over it in order to wash off any bacteria. If the nauplii are less than 12 hours old, they can now be fed to your anemonefish larvae. If they need to be enriched, go to step 9.

Nauplii are only nutritious as long as their egg sack is in tact – approximately 12 hours. After this time, they are a hollow shell for whatever their last meal was. They can be fed phytoplankton other enriched foods like Selco which contains Highly Unsaturated Fatty Acids (HUFA).

Step 9: Place the nauplii in a CLEAN vessel. Add 10 drops of Selco per liter of water. Aerate vigorously. After 12 hours, the nauplii are ready to be fed to your anemonefish babies.

Now they are ready to be fed to your baby anemonefish.

March Meeting Recap
By: Amy Newbold

Dana Riddle was the speaker for the month of March. Lighting vs. Flow. What's more important for the tank? Mr. Riddle stressed that flow in a tank is at least as important as light, if not more. If you put more stress on flow, you have better growth than if you put high wattage in your lighting system. Also if you increase the flow you can lower your lighting wattage which in turn saves you money.

Dana went over the equipment (toys) that you can put in your tank to increase flow.

- Modifying the Maxi-Jet® to get 1500 gph instead of 300 gph, Dana did stress that when doing one of these mods – you might end up with a noisy powerhead and they might or might not work. But cost wise, it's cheap and easy to do. You can find more information at mjmods.com.
- If you have gobs of money to spend and want the ultimate flow in your tank get a Tunze Wavebox. It's only $500 dollars. . . .

What about lighting? Well Dana stressed that you shouldn't over do the lighting because it's a waste of money. He did stress some equipment you might consider getting.

- Light Meter
- Pulse Amplitude Modulation Fluorometer (PAM) is a tool for measuring and determining the photosynthesis electron transport rate. Plain English: it helps you estimate the light reaction of photosynthesis.
- Solaris Light Emitting Diodes (LED) are the new lighting system made from LEDs.

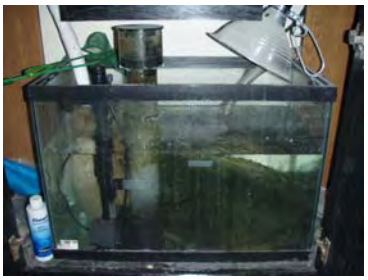
For more information on lighting vs. flow please go to advancedaquarist.com – Dana has written a great analysis of the subject.

March's Tank of the Month: Boodiballa
By: Amy Newbold

Tank of the Month for March is Stephen & Amy Wilkins's 55 gallon All-Glass Tank. This husband-wife pair has been in the hobby for a year and a half. They were introduced to the club by Amy's brother Shawn Winterbotton (Summertop).

The tank's lighting system consists of two (2) 24W T5s. One is an actinic and the other one is daylight 10000k. The photo period is 10:00am to 9:00pm. They're going to add another set of T5s down the line but are happy with the current setup.

The filtration consists of 2" sand bed in the main tank. Circulation consists of a Seio 620 powerhead and another unknown powerhead in the tank. Their 20 gallon tall refugium houses an Excalibur Protein Skimmer and chaeto that's runs on reverse daylight. An interesting fact about their tank is that the skimmer goes off with the lights do because of where it's plugged into. This was not done for any reason, it just happened.



According to Amy, they are "lazy reefers" when it comes to maintenance. They clean the glass often but have only done two water changes in the life of the tank, Once the tank was cloudy so they did a 10% water change and the other time was because their Kenya tree wasn't looking good. Stephen says every eight (8) months or so they seem to need it. He does "bang" the sand with his magnet scraper to get up any debris that is on the sandbed.

They do add calcium on occasion but it's not on a routine or schedule. Other than that – no additives.

Big Black N' Ugly (top)

Currently, the tank consists of mostly softies and a couple LPS.

Amy and Stephen feed the fish pellets, some phyto (when they remember too), and cyclopeeze for the corals. Sometimes they take a bit of chaeto out of the refugium for their yellow tang to snack on but he's pretty happy with the pell

I asked Amy and Stephen what they would of done differently, knowing what they know now. Flow. They didn't have as much flow as they do now but once they increased the flow, every corals started to "take off".

If you know a member who should be Tank of the Month – please contact Shawn Winterbottom (summertop).

Coral:
Yuma Ricordeas
Cabbage leather
Kenya Tree
Toadstool Leather
Green Nepthia
Pink Xenia
Frogspawn
Flowerpot
Candycane
Zoos
Spotted Mushrooms
Devil's Hand Leather
Fox coral
Fuzzy Mushrooms

Fish:
Yellow Tang
Purple Fire Fish
Yellowtail Damsel
Pair of Clownfish
Sixline Wrasse

Inverts:
Hermits
Snails
(2) Peppermints
Serpent Star
Bumblebee snails
Feather dusters
Condylactis Anemone
Flower Anemone
Mushroom Anemone
Rock Crab aka Big, Black N' Ugly

Coral of the Month: Lobophytum
By: Mike Savage

What are your requirements for the perfect coral for your tank? Polyps long enough to see, pretty color, easy to grow without becoming invasive? Easy to frag but doesn't break every time you clean the glass? Possibly you want a coral that won't sting its neighbors and will maintain its color even without metal halide lighting? Maybe Lobophytum is the one for you.

Lobophytum come in many colors such as pink, white, yellow & green. They are also highly variable in shape with some of them having shorter wider lobes and some with longer thinner lobes commonly referred to as Finger Leather or Devil's Hand. Like other leather corals Lobophytum occasionally shed a mucus layer that according to Eric H. Borneman *Aquarium Corals Selection, Husbandry, and Natural Selection* "does serve to rid the surface of accumulated algae and waste." In my experience some increased flow can help shed this layer and afterwards the coral looks vibrant and healthy.

Leather corals can be toxic to stony corals so care should be taken to not have too many in a predominantly stony coral tank. The use of carbon can also be useful to absorb these toxins. To frag these corals you should remove them from the tank and put them in a bowl of tank water. Take a sharp blade or shears and cut off a piece. The coral will put off some slime. Rinse this slime away and put the parent colony back into the tank. Putting it in an area of medium flow will help it heal. Attach the frag to a plug or rubble rock with a loose rubber band or wrap bridal veil material around the plug and frag. Then gather the material and secure it so the frag is touching the plug but not smashed against it. Another method is to just push the frag into the substrate or wedge it between two rock. When you are done dump the bowl of water out. Do not return it to the tank as it will have mucus and toxins from the wounded coral. In a couple of weeks you probably won't be able to tell the parent was fragged and the new coral should be attaching to the plug and looking healthy. Lobophytum is a good beginner's coral and one treasured by veterans as well.

Fish of the month: The Great White Squippy (*Salarias fasciatus)*
By: Jamison Hensley

I'd like to dedicate this article to all my peeps in L-town (yes, both of them) and to the longest lived fish in my aquarium. I picked Lenny up at Aquatic Dreams about 2 years ago and he has been nothing but a splendid reef inhabitant. This species has many common names. Among those often heard are Sailfin Blenny, Algae Blenny, Jeweled Blenny, Jeweled Rockskipper, Rock Blenny, the Hilarious Salarias, or most commonly…the Lawnmower Blenny. I'm really campaigning for the Great White Squippy though.

These fish are very abundant in just about every fish store and can be yours for the low cost of $10 to $15. In my opinion, the Lawnmower Blenny, although very common, is much unappreciated by many reef hobbyists. They typically don't find their way to our tanks until we have an algae outbreak that we need help controlling.

Most folks are looking for something colorful, flashy, super active, rare, or carnivorous. Though these blennies may not fit the mold in those categories, I'm here to say that they are way cool in so many other ways. What these fish lack in everything else, they make up for in personality. Mine is constantly perching in my Star Polyps, "kissing" algae off the glass, practicing his color changing abilities and staring right at me with that cute face.

These guys sport some really cool "eyelashes" and what looks like a very macho handlebar mustache. Because they are such efficient grazers of problem algae, a healthy specimen will usually have a very attractive; very distended pot-belly too. (A swimming testament that gorging yourself on salads may not be the answer to a slimmer you).

In my opinion, a Lawnmower Blenny should seldom be kept in anything smaller than a 50 gallon aquarium unless you readily supplement his diet with appropriate foods. These fish do tend to starve slowly in smaller tanks with insufficient, naturally occurring algae. If well fed, however, this is a very hardy, extremely outgoing fish that will offer countless hours of entertainment and enjoyment.

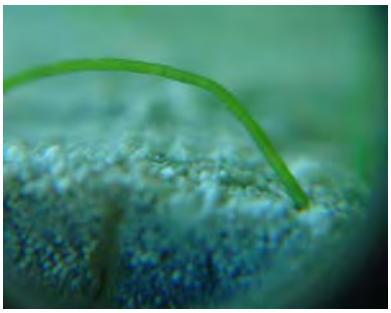
If you wish to see Lenny the Blenny in action, feel free to drop on by. He's never shy about putting on a show for visitors, and perhaps you too, will find yourself in the market for the infamous GREAT WHITE SQUIPPY!

Algae of the Month: Chaetomorpha
By Mark Peterson

Of course most, if not every reef hobbyist, knows this algae. Chaetomorpha is a green algae with fine, unbranched filaments, consisting of large cells arranged in a single row end to end. The filaments are usually stiff or coarse, retaining their shape when removed from water. The individual filaments can be straight, curled or twisted and the whole plants can be either clumps of straight filaments, like a clump of grass, or a tangled mat.

Wondering just how long ago I started using "Chaeto", I did a search on the Message Board. "Chaetomorpha" was mentioned there as early as May 2003. This algae has become so widespread in its use that I was surprised to find reference to it by someone looking for it in Hong Kong!

Cheato has great use as a nutrient exporter by it's effective assimilation of nutrients like N and P. Certainly, other nutrients are also assimilated but unlike Caulerpa, which may dissolve and disappear when nutrients are low, this algae seems to simply grow a little slower in nutrient deficient conditions.



A nice mat of Chaeto makes an ideal environment for all the little bugs of the refugium. It makes a nice covering for a lower oxygen sand layer and a benthic zone for sponges to flourish. And if you have a naughty guy that's been eating coral, placing him in a separate tank with a powerhead, some LS, LR rubble and a ball of Chaetomorpha mixed with other macroalgae keeps him happy eating chunks of shrimp, etc..

Ode to the Hobby - Poetry
By: Adam Blundell

There was an aquarist sitting at home
When an idea appeared inside his dome
To make the water shimmer
I'll use a big skimmer
The key is to produce more foam

An Ode To The Alarm
Oh what a dreadful night
The sump sprang a leak
It was late….. and it was dark

That silicone should hold
Or at least, that is what I thought

The living room floor, the tank itself
All sanity lies in wait

At 2 am I awake

The sound never heard before
Yet unmistakable and known
My thanks to you not-so-silent friend
The water sensing alarm saved the day

I took my lights and began to fiddle
I thought the par might be too little
Now the corals are fried
The fishes have died
I should have asked Dana Riddle