

March 2007 - Rod Connock (Rod the Reefer)

Congratulations to Rod for winning the MASA Feature Tank of the month, for March 2007.

You can read up more about Rod's (aka Rod the Reefer on RTAW Forums) tank in his Tank Journal Thread.

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Introduction

My fascination with all things aquatic began at an early age. At just 13 I had aquariums in nearly every room in the house and was breeding fresh water fish. I had also set up my very first salt water tank. This was about 35 years ago, when information on keeping marine species was virtually non existent. Of course I made many mistakes, from trying to keep sea horses with lion fish to under gravel filtration. Over the years my fascination hasn't diminished. There has been times when I wasn't able to even keep one aquarium! But when I could I did.

About 5 years ago, after visiting a few local aquarium stores and seeing the array of marine species now available I knew I couldn't resist any longer – I just had to set up a reef tank!

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Current System

This tank is the result of the progression of three tanks. Originally set up as a 9 litre nano and quickly moving on to a 75 litre tank, which is now my son's mini reef.

My 350 Litre tank was established in September 2003. It is made of 8mm glass and measures 4' x 18' x 20' with an internal weir feeding into a refugium housing live rock rubble and Caulerpa. A second sump provides additional water volume and an ideal place to hide equipment like the skimmer, heaters and return pump.

I liked the idea of keeping the system as natural as possible and based it on the 'Berlin' system with lots of live rock and sand. After cycling the live rock and crushed marble, the original inhabitants were moved from the 75 Litre, including a purple Lobophyllia and an Euphyllia ancora. There has been outbreaks of nuisance algae, Aptasia and flat worms, but with patience and perseverance all have been eradicated.

Equipment

I wanted to keep the system as simple and effective as I could. I tried to strike a balance between it being an artificial, closed system and keeping it as natural as possible. Obviously there had to be some equipment and I decided upon what I thought were the basics to help keep it stable.

To cope with the evaporation, I made up a 60 litre top off tank, dosing Kalk. To keep up with the coral's demands for calcium and carbonates, I installed an Aqua Medic Calcium reactor with a JBL pH controller. My original choice of protein skimmer was quickly upgraded to an Aqua Medic Turboflotor 1000 and more recently has been upgraded again to a Reef Octopus NW 200-6540. For both the closed loop circulation and the return pump I chose Eheim 1260 pumps. Considering I had more than one tank in the room I decided to air condition the room with a split system air conditioner for those really hot days.

I also considered the 'what if' there was a power outage during a hot period and not only have the tank shut down, but also the air conditioner. I overcame this situation with a mobile air conditioning unit and back up power from a generator.

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Filtration

I'm a firm believer in keeping it simple and natural. The heart of my system's filtration is the 100 kilos of live rock and a deep sand bed. Good water flow keeps the dissolved organic compounds and detritus suspended in the water column where they are exported from the tank to the refugium. In the refugium I have more live rock and copious amounts of Caulerpa Prolifera as an algal scrubber. From the refugium the water feeds through a 50mm drain to the sump and the Reef octopus needle wheel protein skimmer and activated carbon. From the sump the return pump feeds the water back into the display.

Lighting

Two Aqua One HD 150w Mh pendant style lights, along with three 15w Coralife actinic 03 lighting were installed right from the start. I was using the actinic lighting to simulate a dawn and dusk with this.

Lighting Schedule

- 9.30am - Actinics on
- 10.30am - First MH on
- 11.30am - Second MH on
- 8.30pm - First MH off
- 9.30pm - Second MH off
- 10.30pm - Actinics off

Recently I installed a skylight with three 250mm Solatubes to supplement the display with natural light. I have also replaced the actinic lights with a single 40w Marine-Glo 'actinic bulb as I needed to make room for the tubes. The solatubes are producing intense light during the middle of the day. During summer I am able to switch off the Mh's and not only conserve energy, but reduce excess heat over the tank. It has only been a short time but the coral has responded to the sun light with growth and coloration. Some of the added advantages of the skylight that I have noticed so far are a beautiful natural dawn and real moon light!

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Supplementation

In my opinion there is no aspect of reef tank chemistry more important than calcium and alkalinity and maintaining appropriate levels of each. In the beginning I was supplementing with a two part system. As I started to concentrate on more stoney and SPS corals and the tanks overall demand increased I realized the wisdom of using a system that would add balanced amounts of calcium and alkalinity.

At this point I added my Aqua Medic 400 Calcium Reactor and began dosing kalk via the top off water. The combination works very well in maintaining these levels. I also replenish Magnesium with Dolomite in the reactor. I am a bit compulsive about testing the water parameters and do so weekly and record all details.

Water Parameters

- Ca: 420ppm (Salifert)
- Alk: 10dKH (Salifert)
- Mg: 1350ppm (Salifert)

- SG: 1.026 (refractometer)
- Temp: 27deg Celsius
- pH: 8.00-8.40 (JBL pH controller)
- NO3: Undetectable (Salifert)
- PO4: Undetectable (Salifert)

Maintenance

My weekly routine is to check all equipment and make sure everything is operating properly. I clean the skimmer, check the calcium reactor and CO2 tank, check all pumps, the controller and clean any accumulated salt creep from around the tank. Kalk is replenished and algae is removed from the front glass as needed. Every three months I re-calibrate the pH probe. About every six months I clean out pumps, needle wheel and plumbing.

Feeding

I feed the tank daily. I try to vary the foods given as much as possible. Usually it's a mixture of a few of the following; Marine dinner, Mysid shrimp, Ocean Plankton, Nori, Spirulina Brine shrimp, Live brine shrimp enriched with Selco, Marine green, Krill, Spectrum pellets, sun dried baby shrimp, blood worms and an occasional cockle as a treat.

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Livestock

From the beginning I wanted the corals to have room to grow. Most of my SPS corals have grown from small frags and as they have grown I have had to remove other inhabitants to give them room. I also, through necessity need to fragment some of my faster growing species on a regular basis, which is great for trading with other society members.

Current Species

- Acropora colonies
- Pocillopora colonies
- Montipora
- Seriatopora
- Stylophora
- Echinopora
- Zoanthids
- Fungia

- Lobophyllia
- Euphyllia divisa
- Tubipora musica
- Turbinaria
- Duncanopsammia
- Catalaphyllia
- Pavona
- Briareum
- 2 Tridacna maxima clams

Fish

- Yellow Tang (*Zebrasoma flavescens*)
- Purple Tang (*Zebrasoma xanthurum*)
- Pair Orchid Dottybacks (*Pseudochromis fridmani*)
- Pair Fire Clowns (*Amphiprion melanopus*)
- Pair Yellow Acro Gobys (*Gobiodon okinawae*)
- Pair Citron Acro Gobys (*Gobiodon citrinis*)
- Green Acro Goby (*Gobiodon histrio*)
- Pair Mandarins (*Pterosynchiropus splendidus*)
- Harem of Stocky Anthias 1 male, 4 female (*Pseudanthias hypselosoma*)

Cleanup

- Pair Banded Coral Shrimp
- Cucumber (Burnt sausage)
- Trochus snails
- Acro Crabs
- Hermit Crabs
- Tropical Abalone (*Haliotis varia*)

Acknowledgements

Firstly, I would like to thank my wife, who supports me in my hobby and helps me to make this dream a reality - she loves it as much as I do! I would also like to say thank you to all the fellow hobbyists and friends who have supported me over

the years. The information and help I have received from MASA members and "Reefing The Australian Way" is second to none.

Also a big thank you for choosing my tank as "Tank of the month"; this is an honour to me!