

November 2011 - Oliver Hofmann (CheezotheClown)

Congratulations to Oliver Hofmann for winning TOTM for November of 2011 with his gorgeous Metal Halide/LED-driven peninsular mixed reef.

Oliver is known as CheezotheClown on the RTAW Forums and you can read more on his tank in his tank journal.

Introduction

Wow TOTM, what an honour, thanks.

I remember my first aquarium.

It was a leaky old tank taken home from the tip when I was ten. I put two goldfish in it in the middle of winter. The tank was outside and un-heated and I wondered why the fish didn't really move around much. The last aquarium I had was a standard 4 foot freshwater tropical when I was still in school. I guess this TOTM really started when I decided to look into keeping an aquarium again, this time salt water, back in '06. I recall researching all I could for around 6 months before actually getting the tank. The hard part was making decisions toward achieving what I wanted, difficult because I didn't know what I wanted! I settled on a 3x2x2 with an emphasis on DIY, at least to try before committing to brand equipment. I say this TOTM started then because that first tank and all the mistakes and trials made with that tank gave me the experience that lead to this setup. I learned where it was important to spend on quality equipment and where I could still save.

When

looking for our house I always seemed to find myself considering the location of a new and larger tank. The house we're in now met that stringent requirement although it was still to be 1.5 years before the new tank was actually to be in the new house. In the meantime the old 3x2x2 was wedged in the laundry and kept kicking over.

I designed

the current tank using Google Sketchup including detailed plans of the stand. Many iterations of the final design, particularly those dealing with the sump and under-stand area, were tried and scrutinised prior to any materials purchased. That was in August '09; salt water was added to the actual tank in April '10. So the tank has been running for about a year and a half now.

Tank

The

tank I settled on is a 6'Lx2.5'Wx22"H. More accurately measured as 1800x790x550mm. I wanted a wider but shallower tank. The height was actually increased 50mm to 550mm as this was much easier for the tank builder to use a standard size. The set up is a peninsular style or against the wall on one of the short ends and viewable from three sides, basically a room divider. I did not opt for Starfire reserving that luxury for the next dream tank.

Stand

I toyed with the idea of getting a steel or aluminium stand fabricated for me but I couldn't resist building one from timber myself. I think

my design is extremely solid yet still maximises available space underneath. Incidentally it still is a work in progress with a few more bits of trim to finalise the build.

Sump

Sump

space is crucial as I believe in maximising sump volume. Again the design was made with Sketchup and a cutting list published that I could take to an acrylic supplier. The build itself was again a DIY job. The sump on calculated volume is more than 240L. It is a modified racetrack style and incorporates a settling chamber, a DSB, a chemical filtration section, a refugium, and a large return section.

Filtration

I estimate somewhere in the order of 60-80kg live rock in the tank and a few bits in the sump. I like the look of sand on the base of the display so it is covered with a thin layer. A critical component that I believe is largely responsible for the absence of nitrate is the DSB. I have this set up as a physically separate sump section with dimensions 600x300mm and 200mm deep. I am a proponent of high flows in the sump and particularly the DSB so I run 95% of the sump flow over the DSB, at a guess the rate would be circa 4000LPH. This worked on the 3x2x2 and has worked for this tank too with the evidence of undetectable nitrate when testing. Even though I have a section for chemical filtration I have not really made use of it. Occasionally I have thrown a bag of carbon in the sump. Otherwise PO4 is kept in line with GFO used continuously in a reactor fed by the syphon from the weir.

I also incorporate a refugium on a reverse-lighting cycle where *Culerpa Brachypus* goes wild.

Skimmer

A key, perhaps even the most important IMO, component in the filtration is the Deltec TC2060. The model down would, on specification, have been suitable but at the time was not available locally. Although more coin the performance of this skimmer has been exceptional. Couple that with the absolute ease of use and simplicity to clean the unit I couldn't recommend another brand and am content with the decision I made.

Water Flow/Circulation

At

the heart of the system is an Aquabee UP7000 return pump. This pushes a reasonable amount of water however in-tank flow is primarily achieved with 4x 6105 Tunze Stream pumps. They are controlled with the 7096 controller. Supplementing the Tunze is a Reeflo Dart rated at 13500LPH. The 50mm intake is hidden under the rock structure. This pump is under the tank and set up as a closed loop. The tank floor has six holes drilled, one intake and five smaller 25mm outlets. Four outlet flows are managed by an OceansMotions Super Squirt with an additional outlet used as a bleed line. This is required to maintain flow to within specified limits for the OM Super Squirt.

Lighting

I started to buy equipment well before the tank was even built. Included in the buy was three LumenBright Large reflectors. To go with them are 3x 250W MH 14K BLV SE bulbs powered by Coralvue 250W dimmable e-ballasts. I've recently supplemented the blue spectrum with a DIY build of two 24 LED rails. The LEDs are on 1100-2300 (12 hours) with the MHs 1300-2200 (9 hours).

Other Equipment Other

equipment includes 2x 150W Schego heaters and controller. I also use an ATJ auto-topup driving a Williamson Pumps peristaltic pump. This was on the old tank and is still going strong.

A chiller is a must on this tank. The house gets quite warm and the MH lights impart quite a bit of heat energy into the system. I've upgraded the chiller to a Hailea 1000 fed by the return pump.

Otherwise the latest equipment addition has been a Kamoer dosing pump. Previously I was using a DIY

build using Williamson Pumps and electronic timer. The Kamoer is easier to use and more consistent particularly as my dosing volumes were close to exceeding the capabilities of the DIY unit.

Water Parameters

Water parameters I aim for and generally achieve:

SG - 1.027ALK - 3.5Meq/L (9 dKh)

Ca - 420ppm

Mg - 1300ppm

PO4 - 0-0.04

NO3 - 0

Additives/Chemical Maintenance

I dose a home-made mix of baked bi-carb soda for alk and food grade Calcium Chloride for Ca based on Randy's Recipe. My recipe however is more concentrated giving more time between making batches. When magnesium needs to be dosed I do so manually with a mix of Magnesium Chloride. Nothing else is added.

Fish Stock

I do want to increase the family size but at the moment the inhabitants are

1x *Pomacanthus navarchus* Majestic Angel

1x *Zebrasoma xanthurum* Purple Tang

1x *Synchiropus splendidus* Mandarin

3x *Amphiprion ocellaris* Clowns

1x *Salarias fasciatus* Lawnmower Blenny

1x *Centropyge loricula* Flame Angel

Coral Stock

SPS and LPS varieties: Acroporidae - including Dallas acro along with many frags of others

Pocilloporidae - mainly *Seriatopora hystrix* or birdsnest and a couple of *Stylophora*

Poritidae - mainly encrusting porites

Faviidae - *Platygyra daedalea* maze coral and *Favia* sp.

Oculinidae - I think there is a small colony of *Galaxea astreata* gaining momentum

Fungiidae - fungia

Caryophylliidae - Varieties *Euphyllia ancora* Hammer coral, *E. divisa* Frogspawn, *E. glabrescens* Torch coral and home to the clowns, and *E. parancora* Branching hammer coral along with a *Plerogyra sinuosa* Bubble coral

Mussidae - 1x Blastomussa merleti Blasto, 1x Lobophyllia sp. Lobo, and 1x Scolymia Scolly

Invertebrate Stock

1x Tridacna Sp. Clam probably Squamosa

1x Gonodactylaceus ternatensis Mantis Shrimp (that I know of)

Turbo snails

2x Trochus sp.

Acro crabs

Ophiuroidea Brittle stars

Maintenance Routine

Glass is cleaned as required

NSW
water changes don't happen too often particularly this year with the

generally wet weather. I've resorted to a backup bucket of DDH₂O salt when the guilt gets too much.

Occasional prune of the macro as required both in sump and tank.

2-Part dosing needs to be mixed every three weeks

Skimmer

cup cleaned 2-3 times a week, sometimes less sometimes more. Skimmer deep clean where it is removed has happened once so far but should be scheduled for six-monthly intervals.

Tunze stream pumps every six months deep clean.

Acknowledgements Thank

you to my local MASx society MASS. The generosity of many members has made my time in the hobby richer for the experiences and friendships formed. Thanks to all the RTAW participants over the years. Your collective wisdom, comments, suggestions and even questions have combined to make my hobby experience a success and has kept my interest over the years. Thank you also to the PC&S, there is a large amount of voluntary work that takes place behind the scenes which can go uncredited. Also thank you to the sponsors of the TOTM/TOTY. Tim from Aquablue, I'm looking forward to trialling the prize you offer. And

lastly a big thank you to my wonderful Cheezette the Clown. Thank you for not only being so accepting of my hobby, particularly the time spent on RTAW, but for also trying to be a part of it. That said the Flame stays and there can only be one Benny the Blenny.