



The Living Reef

April 2010 Edition

Next meeting: Sunday 25th April @ 2:00pm
Host: David Sarre, 1 Jameson Street, South Perth.

Hi everyone,

This is my first edition that I did as newly appointed newsletter editor and I'd like to ask everyone to say thank you to Ronald Tan that's done a brilliant job over the past few years.

I've done a few changes in this edition like removing the classified section and renaming some of the titles. I'm open to suggestions and critics, so please feel free to contact me if you have any enquiries.

Welcome to all our new members. Hope to see you at this month's meeting, or at one of our other upcoming events.

Steven Liman

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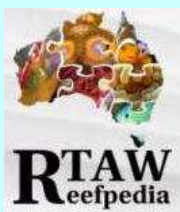
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RTAW Reefpedia

This wiki has been established as an encyclopaedia of reef keeping by the [Marine Aquarium Societies of Australia \(MASA\)](#).

MASWA 2010 Meeting Schedule

Month	Date	Host
January	Wed 27 th	Steve Sterling
February	Sun 28 th	Elmer
March	Wed 31 st	Cicerellos
April	Sun 25 th	David Sarre
May	Wed 26 th	--
June	Sun 27 th	Steve Sterling
July	Wed 28 th	Phil Morris
August	Sun 29 th	Oceanarium
September	Wed 29 th	--
October	Sun 31 st	--
November	Wed 24 th	--
December	--	--

MASWA Contact Information

COMMITTEE – 2010

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Frag Fest Co-ordinator

Steve Sterling – 0418 896 451

stephen.sterling@newmont.com

General Committee

Ronald Tan – 0414 725 322

ronald_tan@iinet.net.au

MASWA Membership Payment

Cheque/money order: Please make payable to MASWA

EFT: BSB 086-136, A/C 8724 73681

A/C name: MASWA Inc.

(please include your name on all EFT transfers!)

Cash: Make cash payment in person only.

Postal Address:

MASWA
c/o Alasdair Whyte
GPO Box R1253
Perth WA 6844

MASWA Message Board

MASWA Club Activities

Our newly appointed Vice President, Anthony Suiter came up with some ideas to improve our club. One of them is through group activities or even just a BBQ. Some of the activities he came up with are bowling, movie night, maybe fishing, diving, etc.

So if you were thinking of contributing to the society, now would be a good time to think of some ideas and post it in the link below. We need people to volunteer to contribute to the team for the benefit of the society, as we are a non-profit organization.

Full discussion is [here](#).

Hosting a MASWA Meeting

We are always looking for members who would like to host a meeting. You don't need to have a showpiece tank, we like looking at all sorts of tanks from nanos to 10 foot monsters, from just setup to well established.

As a host you won't need to provide anything for the meeting (except standing room or some chairs if you have some), MASWA will bring along everything else.

All we ask for is a short talk on your tank (see the Host Presentation below for some ideas on what to talk about)

According to our calendar, there are about 4 spots that need to be filled, so if you are interested in hosting a meeting don't hesitate to contact any committee member or post it in MASWA Members sub forum.

Full information is [here](#).

MASWA TEST KITS Free water testing

MASWA members are able to bring along water samples to any meeting and test their water.

This is handy to verify your own test kits, or to try a kit you don't have at home.

The kits are mainly Salifert tests and include pH, Calcium, Carbonate Hardness/ Alkalinity, Nitrate and Silicate.



Chris also brings along his Phosphate Light Meter and MASWA now has a Refractometer to test the salinity of your water.

This is a great free resource so be sure to take advantage of it.

If you are unsure of how to test your water, bring along about 100ml and ask for help (also free!)

Last Months Meeting Rundown

Last month's meeting was our annual meeting or AGM that was held in Cicerello's. The outcome of the meeting was the new MASWA 2010 committees as listed above. Craig Adair was kind enough to show us behind the scenes tour at no cost as it was covered by MASWA.

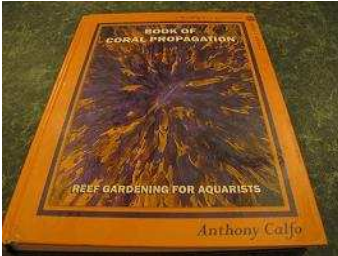


The Marine Aquarists Society of WA is a name that we, as a group of friends with like interests have applied to ourselves for the purpose of information exchange. No one person, nor the group as a whole, can be held responsible for liabilities, injuries or other that may result either directly or indirectly as a result of our gatherings or the information exchange therein. The same applies to the information contained in this newsletter.

Upcoming Meeting Information

This month's meeting is going to take place in David's house in South Perth, and this is the most anticipated meeting so far so don't miss it.

David will give us a tour for his long established 4x2x2 tank and one of the best private coral propagation systems in the country. The propagation tank itself measuring at 1800 x 1200 x 400 with 400 x 400 x 400 DSB, 1000 x 300 x 400 Sump, and 400 x 400 x 400 Refugium all connected together.

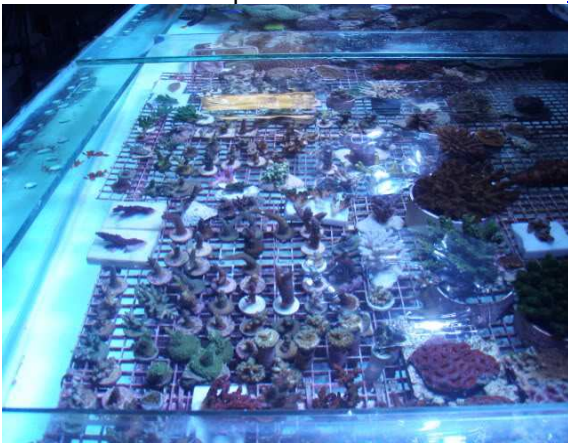


All members please remember to bring your membership card, as all door prize will be drawn via your membership card.

If you didn't bring that to the meeting, you will not be eligible for the draw!

Our monthly raffle this time will include a coral propagation book by Anthony Calfo that's kindly donated by David.

Here's some of the photos that's taken from his [tank journal](#).



Formalities of the meeting will be:

- President address
- Introduce new members
- Host's talk on his tanks
- Frag Demonstration and FREE Frag
- Various propagated corals for sale
- Door Prize
- General discussion
- Raffle drawn
- Wind-up

Science News

Computer Model Helps Biologists Understand How Coral Dies in Warming Waters

ScienceDaily (Apr. 12, 2010) — Cornell University researchers have developed a new tool to help marine biologists better grasp the processes under the sea: mathematical models that unveil the dynamics of bacterial communities behind afflictions that bleach and kill coral.

Warming waters are triggering coral bleaching and disease in the Caribbean, Indian Ocean and Great Barrier Reef off the Australian coast. The new models explain for the first time how beneficial bacteria on coral suddenly give way to pathogens when waters warm.

"Before this study, we just had observations but little understanding of the mechanism" for what causes coral disease and bleaching, said Laura Jones, Cornell senior research associate in ecology and evolutionary biology and a co-author of a paper that appears in *PLoS Biology*, published by the Public Library of Science.

Justin Mao-Jones '08, who conducted the research as an undergraduate in the School of Operations Research and Information Engineering, is the paper's lead author. Stephen Ellner, Cornell professor of ecology and evolutionary biology, is the paper's senior author.

The model reveals how a healthy, normal microbial community in the coral surface-mucus layer protects corals from disease by preventing the invasion and overgrowth of pathogenic bacteria. But when corals are stressed by warmer temperatures (a heat spell), for example, the community of microbes suddenly switches. Species associated with a healthy coral organism -- "resident species" -- decline as pathogens associated with coral disease take their place.

The researchers used models to simulate bacterial community dynamics within the surface coral mucus under normal conditions and under warmer conditions.

"There's a critical threshold where the system jumps to a pathogen-dominated state," said Jones.

They also found that the models replicated a pattern others have observed: Once the disease-causing microbes establish themselves, they persist even if the water cools down enough to favor the beneficial bacteria. The coral is then often too damaged to recover, and the reefs begin to die.

Preventing oceans from warming will require people to curb climate change, and may be unavoidable in the short term, said Jones. But reducing poor water quality, which stresses the coral and makes the oceans more hospitable to pathogens, could perhaps ward off the sudden shift to pathogens dominating the coral surface, she added.

Kim Ritchie, a marine biologist at the Mote Marine Laboratory in Sarasota, Fla., also co-authored the paper. The study was funded by an Emerging Infectious Diseases grant from the National Science Foundation.



A diver swims among partially bleached coral at the Looe Key Reef in the Florida Keys National Marine Sanctuary. (Credit: Erich Bartels)

Cornell University (2010, April 12). Computer model helps biologists understand how coral dies in warming waters. *ScienceDaily*. Retrieved April 21, 2010, from <http://www.sciencedaily.com/releases/2010/03/100329203228.htm>

Feature Articles

CHEMISTRY AND THE AQUARIUM by RANDY HOLMES-FARLEY

Solving Calcium and Alkalinity Problems

For many reefkeepers, correcting undesirable [calcium](#)¹ and [alkalinity](#)² values can be among the most vexing of the chemical problems encountered in maintaining a reef tank. Most reefkeepers know that if these parameters are not maintained appropriately, corals and other organisms may have [difficulty](#)³ in depositing calcium carbonate skeletons. Understanding how to solve such problems, however, proves more elusive. Unfortunately, it is often not as simple as adding more of whatever is depleted.

Here, for example, is a real question that typifies the problem:

I'm having problems raising my calcium levels above 200 ppm. I have been using kalk for about two weeks for all top off water, about 3/4 gal a day. The level has never gone above 250 ppm and drops back to under 200 ppm. I bought some Turbo Calcium and tried it as the product label recommended but am having no real success. I have never used Turbo Calcium before and was wondering how much of it I could dose safe. I only have 2 mushrooms and 2 damsels. Any advice?

Unfortunately, calcium and alkalinity are [linked](#)^{4,5} in many ways in reef tanks, and these links can lead to serious problems if they are not fully understood. If, for example, you add too much of a calcium supplement, you will drive down alkalinity as you get precipitation of calcium carbonate in the tank. Likewise, adding too much of an alkalinity supplement can result in reduction of calcium. Consequently, trying to correct one problem can cause another. Moreover, if you try to correct a calcium or alkalinity "problem" with the wrong type of additive, you might accomplish nothing more than creating limestone in your tank.

This article will clarify the different types of calcium and alkalinity problems encountered in typical reef tanks, and will describe in detail how to "solve" each of them. In reading through the article, you may feel that I am making it unduly complicated. Remember, however, that this article describes how to solve many different problems, while any given tank can only have one of them, so only a small section will apply.

Unlike most of my articles, this one is not written to provide a deep understanding of the science behind calcium and alkalinity in reef tanks. Those topics have been dealt with in several of my prior articles. This one reads more like a recipe. Nevertheless, this is the procedure that I go through (in my mind) when giving advice about correcting calcium and alkalinity additions, and there really is no shortcut that will ensure success (and plenty that ensure failure).

At the end of the article, I'll also emphasize the best way to avoid these problems: using balanced calcium and alkalinity additions. I believe that using such additives would eliminate the majority of problems that people have with calcium and alkalinity, and I very strongly recommend their use.

One caution: many people get faulty readings from aquarium test kits. Some of these problems are the fault of the kit, and some the fault of the user. Regardless, if an aquarist were to "correct" a problem that was really only due to a faulty measurement, then the tank may go from fine to disaster. So please, before making any big corrections to water chemistry, confirm the reading with a different kit, preferably a different brand. This caution should especially apply if the measurement does not seem to make sense based on what you have previously added to the tank.

To read more on this go to the link below.

Source: <http://www.advancedaquarist.com/issues/nov2002/chem.htm>

MASWA Sponsors

MASWA now has fourteen commercial sponsors with Ultra Reef as our latest addition. It is owned and run by Adrian Li (Masa username amashun). MASWA sponsors receive an advertisement (for monthly specials, etc) and a banner in the newsletter each month. Depending upon what has been agreed with the sponsor they may offer MASWA such things as member discounts, donations of goods, gift vouchers or special offers.

Advertisements in The Living Reef do not necessarily reflect MASWA endorsement of any product, service or advice offered by the advertised business. If you are interested in becoming a MASWA Sponsor, please contact Chris Sutton on 0419 858 108 or email: maswa@masa.asn.au



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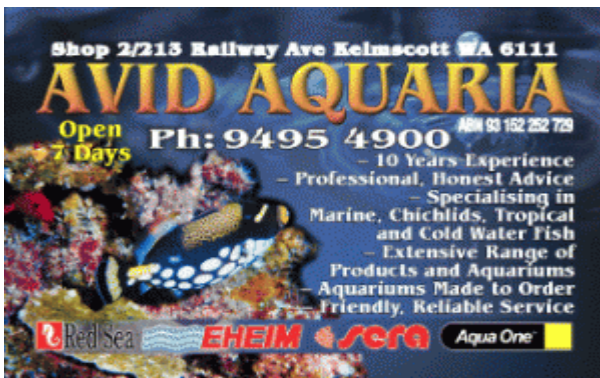
[Aquarium Artists Australia](#)

Shop 2/712 Ranford Road,
crn Boardwalk Boulevard
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[Website](#)

Phone: (08) 9490 9900

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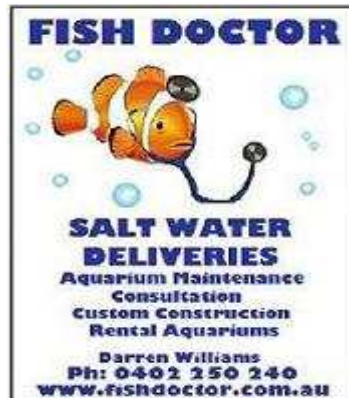
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all over Perth WA 6000

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[Website](#)

Phone: +61 8 9409 3039

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[Oceanarium](#)

P.O. Box 283
Quinns Rock WA6030

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Phone: 0427 941 126

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[Pet Magic Cannington](#)

8 / 1500 Albany Hwy
Cannington WA 6107

[Website](#)

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[Website](#)

Phone: (08) 9344 7210

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TheFishVet

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Phone: 0421 822 383

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[Veba's](#)

Cnr Carrington & Forsyth St
O'Connor WA 6163

[Website](#)

Phone: (08) 9314 7630

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Tank of the Month - March

This month's TOTM Winner is Dee Gjedsted aka. Deester. More info [here](#), and his tank journal [here](#). Unfortunately due to a sudden change in career and moving interstate he had to pull down his tank not long after he won the TOTM.

