

# ATOLL

The Journal of the Marine Aquarium Society of Toronto



Volume 24, Number 1    Fall 2010

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# The Journal of The Marine Aquarium Society of Toronto

## Marine Aquarium Society of Toronto

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in all its facets**

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Letters, articles, questions, or comments are welcome, and should be sent to MAST at:

12 HumberSide Ave.  
Snelgrove, Ontario L7A 1L4  
Canada

[mast@rogers.com](mailto:mast@rogers.com)

*AtoII* Editor: Bryan Reid [mast@rogers.com](mailto:mast@rogers.com)  
*AtoII* Advertising: Edwin Agbuya

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**Cover:** Red-legged hermit crab exploring the inside of a sponge at "Keepsake" on Klein Bonaire  
Photographed by Michael J. McVicar

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# Newbie!

By Steve Ellis

I first developed a real interest in aquatic life when I was fourteen, back in 1962. Having grown up in the UK and not living very far from the sea I had spent many summer days as a child puttering around in rock pools. Also I had been taken by family to the London Zoo Aquarium and to the famous Brighton Aquarium, which is still one of the oldest public aquariums in Europe.

My first tanks were freshwater and I undertook my apprenticeship with the zeal of a Newbie! I was soon fascinated by Guppies breeding, like many first time fish keepers. I then moved on to Labyrinths such as the Dwarf Gourami, Colisa lalia and Betta's, Betta splendens, as the books said that they were good species for a novice to start with. Over the following years I had success with breeding a number of other fresh water varieties.

Through someone I meet at my LFS I was also introduced to a fish club, East Dulwich Aquarists Society (EDAS). Like MAST the members were full of helpful knowledge and advice.

At that time no one in EDAS had any interest in keeping marine life. However, being inquisitive I started reading what little I could find about keeping marine life.

The first problem that I could see was that the aquariums that were available at that time would not be suitable. The problem being that the tanks had steel frames and the glass was held in place with a type of aquatic putty. Also they leaked on a regular basis, so I could expect that the saltwater would corrode the metal frames. I was not sure about the putty sealant being toxic when in contact with saltwater.

By this time I was seventeen and had my first car. Also I was an apprentice electrician. What may you ask had these two factors in common, and with me starting to keep marine life?

At one of the jobs that I was working on, we had to remove some large Lead Acid Batteries from a factory. They had been used as a source of DC power for electro plating.

Each battery measured 24" x 12" x 12" and were made from glass. I managed to get hold of a few of them. Lucky for me I had a station wagon as the cells were very heavy to move.



6"x12"x12" Battery Jar

With some help from one of my co-workers we drained the acid and removed the lead plates. Once cleaned the glass jars made excellent small saltwater aquariums for me to experiment with.

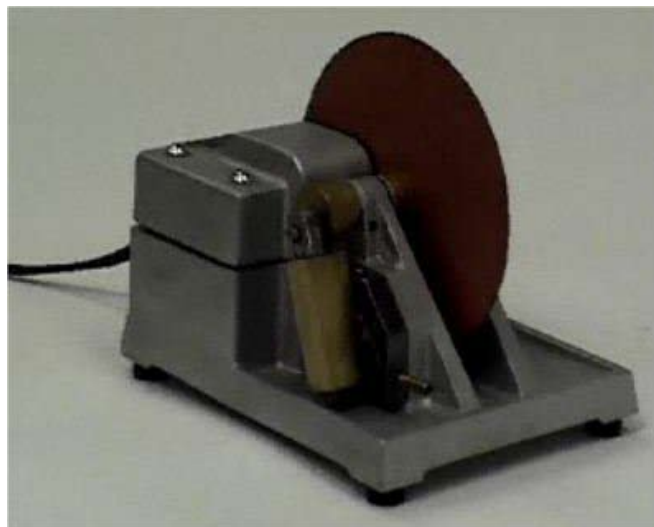
Having my own transport also meant that I could travel when ever I wanted to the coast and search the rock pools for suitable specimens. In the mid sixties, artificial saltwater was only just starting to become available from Germany. Also it was expensive! Being on a restricted budget, I decided that I would use natural sea water. This raised another problem, how to transport the water. Fortunately one of my relatives made his own wine and had several spare 5 gallon glass carboys. Problem solved!

## Filtration

Soon I had setup two saltwater tanks, which I guess would now be called Nano Tanks each having a volume of around 14 gallons. I had been using under gravel filters in my freshwater tanks and I could see no reason not to do the same in a saltwater tank. I knew that what ever I did it was an experiment. Power heads were just being talked about in the fish keeping magazines. In my filter system the water flow through the sand bed was created by airlifts using wooden air blocks to give a fine stream of bubbles.

For the sand bed I used a mixture of crushed cockle shells and silver sand as I thought natural sand from the beach could be polluted.

My pride and joy was a piston air pump that I had bought at an EDAS auction. I had several Rena diaphragm pumps running on the freshwater tanks. But I loved the sound and action of that piston pump, and although well used when bought. It provided many more years of service.



## Lighting

In general at that time ordinary tungsten incandescent lamps were used in the hobby. Unless you were rich! In which case fluorescent, and other discharge lamps were starting to be used. Little or nothing was discussed regarding the light spectrum. Specialised fluorescent lamps such as Actinic did not become readily available until the 70's. I started with ordinary tungsten lamps over the marine tanks. Being in the electrical industry I later managed to get a used 40 watt ballast with a standard daylight tube.

## Temperature

As I would be keeping native British invertebrates and small fish, I did not think that heating would be a problem. But keeping the tanks cool in the summer did prove to be an issue. Although summers in the UK were not that hot, I did have a concern when the water temperature got above 60f. At the local library (no Internet and Google in those days) I found out that the mean costal water temperature for the south coast of England was between 48f (winter) and 64f (summer).

I reasoned that during the summer exposed rock pools would get quite hot. I did test this out on several trips to the sea and found temperatures as high as 90f. But of course the length of time that this would be for only a few hours until the tide came in again. I kept the tank temperature down by using a fan to create evaporation, and with the use of ice. At that time I was living at home and taught my mother to watch the temperature and take corrective actions when I would be away for a few days. To this day I don't know how she put up with my ever growing number of tanks and water being spilled on her floors. But she did.

## Collection

The rock pools contained many types of anemones, such as the Beadlet *Actinia equina* and snakelock *Anemonia viridis*.



In addition hermit crabs, molluscs, starfish and Rock gobies *Gobius paganellus*.

I took my time and did not fill the two tanks to the brim with critters on the first collection trip. I brought back first some anemones attached to rock and a few hermit crabs. The choice of

placing rock straight from the sea in to the tank was luck. I did not know at that time that I was introducing live rock with all the filtering benefits that we are aware of now. I later read a German paper about live rock and realised I had stumbled on a factor that would lead to a successful marine tank environment.

Over the next couple of years my experiments continued with various degrees of success. I found that anemones did well with a regular feeding of table shrimp. That too many hermit crabs caused problems with rocks being moved around. Rock Gobies were difficult to get feeding, but once acclimatised to the small tank did well.



When, Tropic Marine Sea Salt became readily available in the UK, having been developed in Germany by Hans Weigandt's, I switched tanks over to it. I had found that natural sea water was satisfactory when fresh, but when stored and used for water changes, the live plankton it contained died quickly. This caused pollution problems.



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Artificial sea water, although not cheap at the time, removed this concern. However looking back I did use regular tap water to mix with the salt. I have no idea what the levels of lead, copper and other undesirable compounds it contained. RO/DI was not even a consideration, although I can remember reading that some people were using distilled water instead of tap water.

Apart from checking the SPG with a hydrometer, I did not have any means of testing the water quality. Around 1970 I got my first test kits and was able to monitor the basic parameters.

## New tanks for old

In the late 60's tanks were starting to be made from the conventional steel frame, but to combat corrosion they were Hot Dipped into Polythene. This helped the saltwater aquarist a lot. The next breakthrough was the development by Dow Corning of Silicon Sealants. Tanks started to come on the markets which were made totally from glass. The early glued tanks in the UK had a plastic frame which did not increase strength and was just for aesthetics. The frame was soon dropped and frameless tanks became the norm.

Around this time Power Filters started to come on the market. In Germany a lot of research was being done by the German Marine Aquarium Society located in Berlin. I was fortunate to be able to get translated copies of their publications. Reading those papers gave me the thrust to move in to keeping tropical marine fish. Unfortunately I no longer have those publications as I would like to be able to read again the history and turning point of our hobby.

My first tropical saltwater tank was 50 gallon all glass. I used an external Ehime power canister filter. Tuffa dry rock and dead corals. I now look back on what I had setup in horror!

After a while I decided to convert this fish only tank into my first reef tank. In the German publications I had read of the Berlin method. I built my own skimmer from their drawings and seeded the tuffa rock with some live rock. This was specially imported by my LFS.

Over the coming years I refined and experimented, moving up in size of tank eventually to 150 gallons. I kept saltwater tanks until the mid 80's when my work sent me traveling all over the world, leaving no time to maintain my tanks.

After retiring and moving to Canada in 2004 I came back into the hobby. During the "Dry" period a lot of developments had changed the way of keeping a reef compared to my early days. I found myself once again "almost" a Newbie!

Steve Ellis 



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# Call for Nominations

Nominations are being sought for all positions of the MAST executive board for a one year term, June 2011 to June 2012

**President, Vice-President, Treasurer, Directors (4 positions)**

Nominations for candidates to stand for election must be proposed and seconded in writing by members in good standing as defined in the MAST Constitution and must be accompanied by the written consent of the nominee(s).

Emails are acceptable.

Elections will take place at the Annual General Meeting Wednesday June 8, 2011 at the Hillcrest Public Library, 5801 Leslie Street, Toronto at 7:30pm sharp.

Nominations will be accepted up to **May 1, 2011**. Please send nominations to **mast@rogers.com** or via regular mail to :

MAST, 12 Humberside Ave., Snelgrove ON L7A 1L4

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## Annual Spring Auction

**Wednesday, April 13, 2011**

**This is the big event of the year – huge auction of livestock & equipment.**

**Last year we had over 150 items for sale, including a great selection of full coral heads, frags and equipment.**

**Arrive at 7 p.m. for registration of sales items.**

**Corals should be tagged in advance with name or brief description.**

**7:30 p.m. - auction begins**

**Seller gets 70% of sale price. MAST keeps 30% to defray costs.**

**Reserve price allowed for items over \$100.**



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# 2010 Photo Competition Winners

Congratulations to the 2010 photo competition winners. Each winner received a one year membership renewal and a MAST golf shirt. Start practicing your photography and save your best pictures for next year's photo competition. Categories and great prizes will be announced after the summer holidays in 2011.



***Above:***

**Best individual Fish Class winner:** Stephen Karakatsanis

***Right:***

**Best Individual Coral Class winner:** Stephen Karakatsanis

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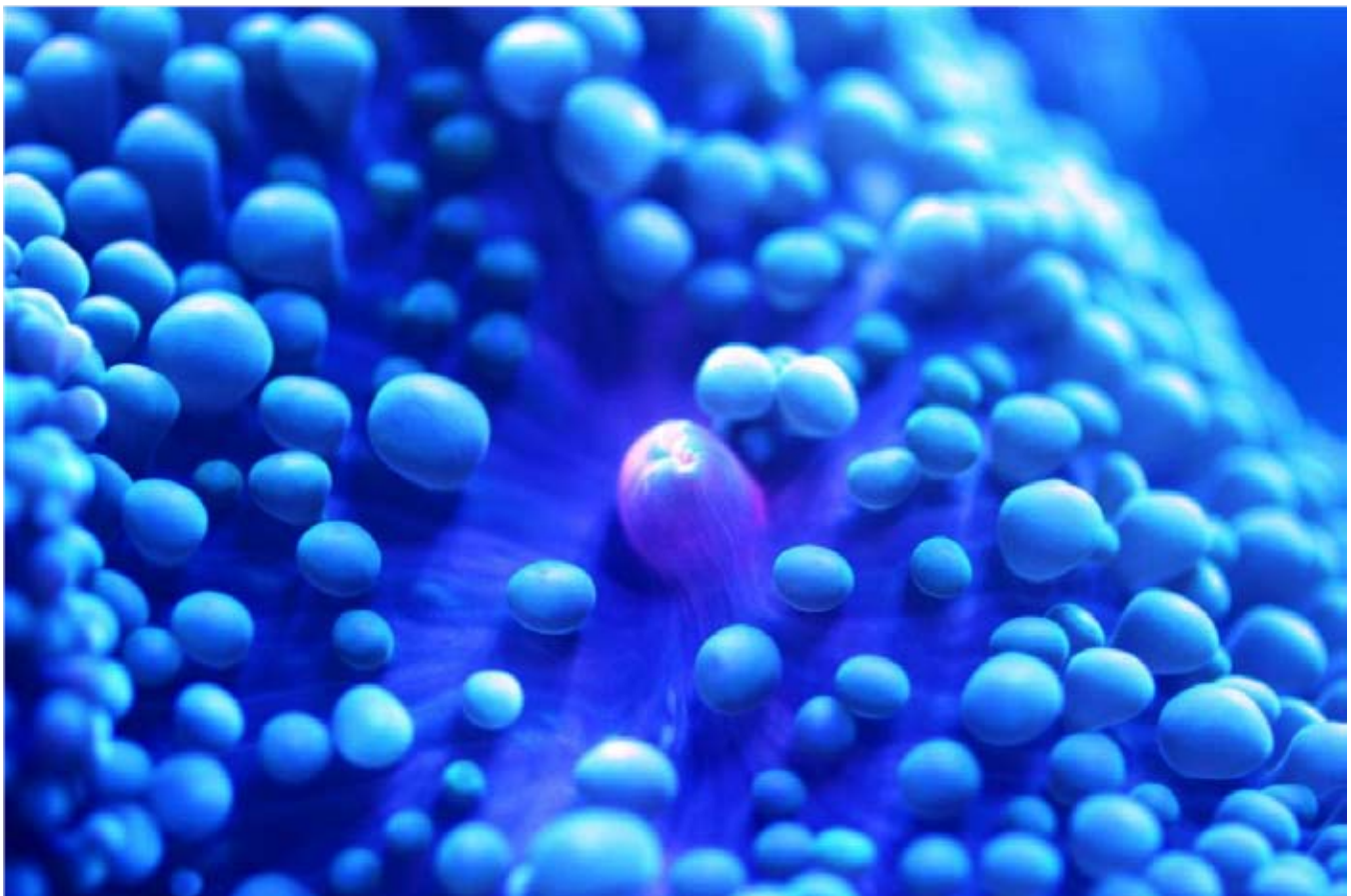
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**Above and Top Right:**  
**Best Equipment or Tank Class Winner: Albert Poon**

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**Above:**  
**Best in Novelty Class winner: Stephen Karakatsanis**





## The Marine Aquarium Society of Toronto

is proud to present

### *Charles Delbeek*

*Senior Aquatic Biologist at  
California Academy of Sciences  
&  
A Founding Member of MAST*

### ***“Design, Construction and Progress of the 200,000 gallon reef tank at the California Academy of Sciences”***

**Saturday, April 9, 2011**

**2:30 p.m. – 4:00pm (doors open at 2:00)**

**Living Arts Centre, Rogers Theatre**

**4141 Living Arts Dr, Mississauga, (905) 306-6015**

Charles Delbeek has been caring for marine organisms in closed systems for over 40 years. As a professional aquarist he has worked at the Waikiki Aquarium in Honolulu and the California Academy of Sciences, San Francisco. His professional interests include the ecology and captive husbandry of marine and freshwater fishes, corals, aquatic plants and cephalopods.

A certified SCUBA diver since the age of 14 and accomplished underwater photographer, Charles has made over 500 dives in locations throughout the world including Canada, Fiji, Hawaii, Indonesia, Japan, south Korea, the Marshall Islands, Palau, the Philippines, the Solomon Islands, the Florida Keys, Bonaire, St. Kitts, Thailand and St. Martin.

Charles has lectured at over 50 aquarium-related conferences and meetings, chaired several professional conference sessions, and published over 80 articles in the popular aquarium literature in the last 22 years. He served as the moderator of the online Fishnet Marine Aquarium forum on CompuServe from 1987 till 1991. In addition to writing a monthly reef aquarium column for *Aquarium Fish Magazine* since 1997 and a bi-monthly column for Advanced Aquarist Online, he has co-authored three popular aquarium books with Julian Sprung. *The Reef Aquarium* was published in 1994, *The Reef Aquarium* volume 2 was published in 1997, and *The Reef Aquarium* volume 3 published in 2005, considered by many to be the definitive works in the field.

In addition to his lecturing and writing, Charles has provided consulting services through his company JCD Consulting ([www.jcdaquariumdesign.com](http://www.jcdaquariumdesign.com)) to CMS Collaborative, the Georgia Aquarium, Kerzner International, the California Academy of Sciences, the Long Beach Aquarium, Aquatic Design Group, the Horniman Museum, Lazenby Design Associates, Tenji Inc., Ewah Women’s University, Pacific Ecological Systems and Wayne’s Ocean World, as well as to private aquariums.

MAST members \$10pp

Family of four \$15

Non-members \$15pp

Family of four \$20

For additional information please email [mast@rogers.com](mailto:mast@rogers.com)

# **Dinner with Charles Delbeek**

## **at the Muddy Duck Restaurant**

After Charles' presentation at the Living Arts Centre we will be heading over to the Muddy Duck Restaurant in Mississauga for a dinner with the guest speaker. Tickets must be bought before April 1, 2011 so we can confirm numbers. Tickets include a 3 course dinner, tax and tip. A cash bar will be open for drinks.

Date: Saturday, April 9, 2011 at 6pm

Location: Muddy Duck Restaurant  
2200 Dundas Street East  
Mississauga, Ontario  
L4X 2C3

Tickets: \$40 per person  
(purchased at [www.mastcanada.org/box\\_office/box\\_office.html](http://www.mastcanada.org/box_office/box_office.html))

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# **Tour of the Tanks 2011**

## **Saturday, March 26, 2011**

### **1-4pm**

Back by popular demand the tour of the tanks is a well attended event and a great chance to see other members tanks up close and personal. Throughout the afternoon there are great equipment and husbandry discussions with the opportunity to learn something new and share information. It is not essential to attend the full tour as you can join or leave the tour anywhere along the way.

For a map and directions please send an e-mail to:  
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