

## The Living Reef

September 2004 - Special Raffle!

### Editorial....

In the infancy of reef aquariums at the dawn of the age of metal halide lighting, the first lights to be used over reef aquariums were those borrowed from freshwater planted aquaria. These bulbs were generally lower wattage ie, 70 to 150 watt and had a Kelvin rating in the 4000 to 5000 range. Even though these lights were what we would now consider inappropriate or even useless, they did work and the corals grew. By today's standards however what we then thought was success was far from this. The corals may had shown growth but were predominantly "boring" brown coloured without many or even any bright colours that we commonly see in our corals today. How things have changed since then. It is now commonplace to see a good variety of metal halide globes from 10000 to 20000 Kelvin. This is the colour temperature that we may purchase these globes as but is it really?

You would think that giving a colour temperature rating to a globe would be fairly straight forward but unfortunately this is far from the truth. Try comparing different brands of globes to each other and you soon see that all 10000K or 20000K bulbs are not the same! The advertised Kelvin rating of the globe is often not a true representation of its spectra. Whether this is a marketing ploy to sell us what we want (but are not getting) or an issue of a "standard colour rating system" that differs between manufactures, who knows. Does this really matter? Well not really however consistency among bulb manufacturers would certainly not go astray.

### Inside this Issue....

August (September!) Meeting Rundown	2
September Meeting Information	3
MASWA Sponsors	3
MASWA Message Board	3
Fishy Links and News	5
Buy, Sell, Swap & Wanted	6

## MASWA Meeting Calendar....

29<sup>th</sup> September 2004 - Marine West Unit 1, 29 McIntyre Way, Kenwick Special Raffle

27<sup>th</sup> October 2004 – **Jan Anderson** (Guest Speaker)

24th November 2004 - Bryan Kendal (FragFest V)

15<sup>th</sup> December 2004 – **Nathan Cope** (X-Mas Meeting)

Meetings start @ 7:30pm, Formalities begin @ 8:00pm!

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.

## MASWA Contact Information....

#### **COMMITTEE - 2004**

President – General Enquiries Nathan Cope – 0416 092 000 maswa@ingeniousresources.com.au

Vice President – General Enquiries Tony Fiorentino - 0412 467 519 fioren@iinet.net.au

Treasurer – Treasury/Payment Enquiries
Paul Tayler – 0419 908 264
paul @pmtco.com.au

**Secretary** - Correspondence Marc Shewell – 0419 047 808 <u>marcus @iinet.net.au</u>

**Newsletter Editor** – Newsletter/Membership Enquiries David Bloch – 9304 1274 <u>fishnut@optusnet.com.au</u>

**Web Editor** – Web Page Enquiries Bill Blakers – 9247 3204. **william blakers@excite.com** 

Social Coordinator – Meeting Venues/Advertising Enquiries Nigel Clark – 0412 412 681 dovetails@iprimus.com.au

Science Officer –Research and Scientific Information Paul Groves – 0421 803 288 paul@nw.com.au

#### **WEB ADDRESS**

www.masa.asn.au/maswa/

#### **MEMBERSHIP PAYMENTS**

Cheque: Make all cheques payable to Paul M. Tayler. EFT: Make all EFT transfers to: BSB 086 217 A/C # 69355 1664 (please include your name on all EFT transfers!).

Cash: Make payment in person only.

#### Postal Address:

Paul Tayler (MASWA Treasurer) PO Box 7185 Shenton Park WA 6008

#### **NEWSLETTER CONTRIBUTIONS**

If you would like to make a contribution to the newsletter please don't hesitate to contact the Newsletter Editor, David Bloch on the phone number or email address listed above. Contributions to the newsletter need to be received no later than 10 days prior to the next meeting date.

# August (September!) Meeting Rundown....

As was expected, Nigel's meeting was a corka! We had a huge turnout of members and quite a few visitors too. It was also great to see a few faces from some of the aquarium retail outlets.

Nigel's tank was looking fantastic and had improved markedly from when we saw it last year. Although the tank still has some hair algae, it is slowly decreasing. When we last saw Nigel's tank he had stopped using his protein skimmer however this year, he has added a second unit and is skimming more than ever. Whether this is what we can attribute the health of his tank too it's hard to say. What we can say however is that the corals and fish all looked pretty good (except for a tad of white spot on the Achillis Tang!).

One of the most impressive aspects of Nigel's tank, other than its size, is the diversity of corals. Not only is the tank stocked with most of the common corals that are available in the shops but also rare and unusual specimens that often come in as individuals or accidentally on rock or with other corals. Nigel is a master at spotting these jewels in the rough as prides himself in his ability to see what other people don't see!

One thing that is great about hosting a MASWA meeting is that it forces you to clean and tidy up all the crap that collects underneath and around your aquarium. You also generally give the tank itself a good clean and possibly even a water change. What I can tell you is that if Nigel had not cleaned up around his tank someone either would have had an accident, possibly tripping or falling or died from the smell of the protein skimmer effluent. I was looking after Nigel's tank while he was away the week before and I was temped myself to do a little spring cleaning! It was like a disaster zone in the aquarium room!

The fourth FRGAFEST was held at Nigel's meeting. In total we had 26 animals traded consisting of 12X Acropora sp., 2X Pocilopora damicornis, 3X Fungia sp., 1X bubble-tip anemone, 1X Sarcophyton sp., 2X Sinularia sp. and 5X coralimophs. Most frags were successfully traded to a new home with a few sad corals, namely the Fungia sp. remaining with Nigel to live happily in his refugeum!

To sum it all up the meeting was a great success with new and old faces alike enjoying the evening. Thankyou to Nigel and Hazel for opening their home to us and last but not least Marilyn for organising the food and drinks.

#### REEFY HINTS & TIPS

Does your powerhead often slip down the glass? How about using that spare glass cleaning magnet to hold the powerhead from sliding down the glass!

Tunze® is now using this idea!

## September Meeting Information....

It's been a while since we've had a meeting at an aquarium retailer's shop. The last was a couple of years ago at Ocean Reef's Marine Aquarium. Prior to that we had a meeting at Marine West in Gosnells. That was a fair while ago. In fact it's so long ago that I didn't even write the newsletter for it!

Well it's time again to head to Marine West, the aquarium shop owned and run by Paul and Danuta Williams. It's quite good timing actually as Marine West has become our second MASWA sponsor.

The new shop has a great coral selling tank that is located in the middle of the floor and situated at a height so that you can not only look through the glass but also from above. This lets you see the beauty of the corals and makes choosing your coral much easier.

Like most shops they have a display tank that has all the awesome stuff that comes in and is not for sale (maybe we can raffle some of those beautiful corals in their guys?)! I guess we all hate to see such droolable corals out of our reach – what a tease!

This month will be our "Special Raffle" draw. Tickets cost the same, \$2 each or 6 for \$10. The prize pool is over \$200 so be there or be square!

We will also have complimentary copies of Reef Culture Magazine to give away! Check out the information about this on the MASWA Message Board section of the newsletter on the top of page 4.

The address of *Marine West* is *Unit 1, 29 McIntyre Way, Kenwick.* The meeting starts from 7:30pm. Looking forward to seeing you all there.

#### REEFY HINTS & TIPS

If you hate cleaning your aquarium glass this is for you! It won't totally stop the algae growing on the glass but may increase the time between glass cleans! The basic idea is to put a strip of plastic on the top of the front edge of the glass of the tank. The strip casts a shadow onto the front glass and where the shadow lies, the algae will not grow as readily. The size of the shadow depends on the size of the plastic. You can make the plastic as wide as you want but make sure you it's not too large that you shade your corals!

## MASWA Sponsors....

It's official, MASWA now has two commercial sponsors! MASWA sponsors get an A5 sized add and a banner in the newsletter each month. The addverstisment can be used to advertise monthly specials etc. Depending upon what has been agreed with the sponsor they may offer MASWA such things as member discounts, donations of goods or gift vouchers to the club or special offers.

Advertisements in The Living Reef do not necessarily reflect MASWA's endorsement of any product, service or advice offered by the advertised business. If you would like to advertise in The Living Reef, please contact Nigel Clark (Social Coordinator) on 0412 412 681 or email: dovetails@iprimus.com.au.



**Reef Online** has generously donated several prizes for MASWA to use as we wish throughout the year PLUS an extra 5% MASWA discount on top of the existing 5% MASA discount (ie, MASWA members now get a 10% discount from the Reef Online store.

Web: www.reefonline.com.au

## MARINE WEST

Marine West has generously donated \$50 worth of gift vouchers each month to MASWA.

Address:

Unit 1, 29 McIntyre Way, Kenwick, WA 6107

Tue-Sun 10:00am- 5:00pm Tel/Fax: (08) 9493-0966 **Email:** pjwdrw@bigpond.com

Web: http://perth.citysearch.com.au/E/V/PERTH/0057/37/10/1.html

## MASWA Message Board....

#### THIS MONTH'S "SPECIAL" RAFFLE PRIZES

Just one \$2 ticket (or 6 for \$10) puts you in the draw to win one of the following prizes this month:

- Clownfishes: A Guide to Their Captive Care, Breeding & Natural History by Joyce D. Wilkerson (value of \$72)
- Reef Secrets by Alf Jacob Nilsen & Svein A. Fossa (value of \$70)
- Reef Invertebrates: An Essential Guide to Selection, Care & Compatibility by Anthony Calfo & Robert Fenner (value of \$80)
- 4. Gift Vouchers

Please note, regardless of how many raffle tickets you buy, you can only win one raffle prize per meeting. Purchasing more tickets does give you a greater chance of winning, though.

#### **RAFFLE PRIZE DONATIONS**

If anyone has any books, hardware, livestock or any bits and pieces they wish to get rid of how about donating them to the raffle table? All the monies raised in the raffle go back into MASWA so the better the raffle the better the prizes and the more we can do during the year.

#### GET YOUR COMPLIMENTARY COPY OF REEF **CULTURE MAGAZINE**

Some of you may have heard of Reef Culture, the Australian marine breeding facility based in Queensland. Reef Culture currently breeds and sells six species of clownfish. They can also supply you with live rock, live rotifers, live brine shrimp, microalgae concentrate (for feeding rotifers, brine shrimp, etc) and related hardware (see http://www.reefculture.com.au).



Culture decided to publish available magazine for the Australian marine hobby. The first edition of the magazine has just come out and is currently on sale at major newsagents for \$4.95. It is very nicely put together and contains beautiful photos and interesting articles such as: Planning a Marine Aquarium, Shelled Giants (the Tridacnid clams). Marine Diseases. Food Facts (info about duplicating natural diets), Shark Bay Behind the Scenes (about Sea World's new exhibit), MASA's Photo Competition. Artemia (Brine Shrimp). Colours of the Reef (why reef fish are so colourful) and Information about MASA.

Culture very generously sent MASWA a complimentary copy for each financial MASWA member. To get your free copy, all you have to do is turn up to the next MASWA meeting and be a financial member. If you are not able to get to the next MASWA meeting, give Nathan a call on 0416 09 2000 and organise a time to collect your copy.

#### MASWA DOOR PRIZE!

From now on, we will be having door prizes at every meeting. In order to be in the draw to win the prize, all you have to do is make sure you write down your name (and the name of any partner/guest you have brought with you) on the meeting registration sheet and then put on your name badge (ensure that partners/guests have one too). Once you've done that, see Nigel Clark (Social Coordinator) for your free door prize ticket.

#### MASWA 2004 ARTICLE PRIZE!

To try and encourage members to get actively involved we have decided to offer a \$100 prize to the person who has contributed the most hobby related articles, cartoons or jokes etc to the MASWA 2004 newsletters. The content must be suitable for general audiences (no rude jokes Nigel and Tony! Ed.). The winner will be announced at the December 2004 CHRISTMAS meeting. So far this year we have received 18 articles submissions from 6 different members. The race to win the \$100 is not out of reach yet so submit your articles to be in it to win it! There are still 5 more newsletters left this year!

#### GET READY FOR THE AGM IN JANUARY!

Time is getting closer to the most important event in the MASWA calendar, the AGM. The AGM will be run in January 2005 at the first general meeting of the year. This is the first year in which we have run MASWA with a full committee and we would like to see the same happen in 2005. The Positions in the MASWA committee are:

President Vice President Secretary Treasurer Newsletter Editor Webmaster Social Coordinator Science Officer

What does is mean to be a MASWA committee member? For six days a year (every second month) you get to take an active role in the running of MASWA. You also get to sample the delights of Marilyn's cooking (Paul Taylor's wife). The pay is crap - \$0.0 however the social interaction and "stories" you hear are very entertaining!

To be in the committee you need to be nominated either by yourself of someone else, and if no one else is nominated for that position you are elected to that position. If there are other nominees then a vote is taken by the members for the successful candidate for the position.

If you think you have what it takes and are keen to help out then please talk to a committee member at the upcoming meeting and make your intentions known

#### GENERAL MEETING AGENDA (Wednesday Evenings)

For those new members who have not been with us long or perspective visitors/members reading this for the first time below is a rough agenda of what happens at a MASWA meeting:

7:30pm: socialise and catch up with friends, introductions of visitors and new members to everyone by social coordinator and other committee members.

8:00pm: opening of meeting, formal introduction by president, welcome visitors and new members.

8:30pm: introduce host, host presentation of aquarium.

9:00pm: draw raffle and if appropriate start "fragfest" or guest speaker talk/presentation.

9:30pm: draw meeting to a close.

## Fishy Links and News....

#### POISONOUS LIONFISH LIKELY HERE TO STAY

U.S. wildlife officials concede they cannot stop the venomous lionfish, which might have entered the Atlantic thanks to Hurricane Andrew.

By SETH BORENSTEIN sborenstein@krwashington.com

OFF THE COAST OF WILMINGTON, N.C. -- Divers from the research ship Cape Fear surfaced from 120 feet deep earlier this month carrying two stunningly beautiful striped fish. Looking like refugees from an exotic aquarium, each creature sported more than a dozen poison-tipped spines.

They're lionfish and are normally found in the tropical seas of the Pacific Ocean. But now they are roaming the sandy bottom of the warm Gulf Stream waters, becoming the first non-native ocean fish to successfully invade the Atlantic in North America in documented maritime history.

Scientists aboard the Cape Fear are doing research about 45 miles offshore that confirms the lionfish are spreading rapidly throughout the deep waters off the southeast shoreline. The foot long lionfish devour small reef fish whole, competing aggressively for the food of larger native Atlantic fish. After counting the 75th lionfish found in about two weeks, scientists for the National Oceanic and Atmospheric Administration conceded that America lost a quick battle against the invading sea creature.

"We thought that maybe there is a way to eradicate them," said Doug Kesling, mission coordinator of NOAA's Undersea Research Center at the University of North Carolina at Wilmington. But what scientists have seen aboard the Cape Fear this month has changed that: "There's no stopping them now." "We'll just have to live with them," said Thomas Potts, the Undersea Research Center's science director.

So now NOAA is warning Atlantic divers about the dangers of the hypodermic needle like spines that cover the lionfish from face to fin. The federal government also is telling hospitals and doctors how to treat the painful but not usually deadly stings of the lionfish. (Bathe the area in very hot water.)

#### A PAINFUL STING

Recently, Cape Fear diver Jay Styron became the first lionfish sting victim in continental U.S. waters when a fish he was capturing injected his left wrist with venom.

"This was actually a lot worse than a bee sting," Styron said. He said the pain worsened and was ``more of a deep-boring pain on the muscle itself -- like a bad muscle bruise." For people allergic to the venom, the sting can be deadly, experts said.

Over the past three years, lionfish have been found from South Florida to North Carolina. Juvenile lionfish have been spotted off New York's Long Island, but researchers think those baby fish got swept along the warm waters of the Gulf Stream and won't last the winter.

Paula Whitfield, a national expert on lionfish, and a handful of other researchers on Cape Fear want to assess what they eat, what eats them, and if they are reproducing. So far the answers are scary.

Captured female lionfish are loaded with egg sacks or show signs of just having spawned. Each egg sack contains up to 20,000 eggs and lionfish spawn monthly through the summer. Whitfield's team even captured a baby lionfish about an inch or two long. Until this month, scientists had not been sure that lionfish could reproduce in the Atlantic. Now they are. But the worst news is how well they've reproduced. Before she started, Whitfield hoped that during a month of dives she'd see maybe 30 lionfish. With nine more days of diving to go, researchers had counted 75.

#### SOUTH FLORIDA ROOTS

Just how the lionfish got into the Atlantic is still a mystery. However, scientists have some suspects and a trail leading back to South Florida. The first known Atlantic sightings of lionfish were days after 1992's Hurricane Andrew. Six to eight lionfish were spotted in Biscayne Bay. They had been traced to a private waterfront home's aquarium that got smashed in the storm and swept into the bay, said U.S. Geological Survey fisheries biologist Walter Courtenay. Some experts say this could have been the start of the invasion. But Courtenay says a lack of lionfish between Miami and West Palm Beach points the finger at another suspect. He guesses that local dive boat captains purposely planted the lionfish in deep waters off West Palm Beach as an added attraction to local dive sites, but he admits he has no proof.

http://www.miami.com/mld/miamiherald/news/nation/95 26169.htm

#### CUDDLES THE RED "SHAGGY SHARK" MAKES HER DEBUT

By MICHAEL LEIDIG

New forms of marine life are usually tracked down in the rarefied waters of the Great Barrier Reef or Red Sea. A new species of "furry" shark, however, which hops like a frog rather than swims, has been discovered in the unprepossessing habitat of a German aquarium.

The 70cm (28in) female shark, nicknamed Cuddles, is covered in hairy bristles, has big nostrils and an extra gill that set her apart from the 405 known shark species. According to the dozens of marine biologists who have flocked to inspect Cuddles, her fins are smaller but more muscular than those found on similar-sized sharks. She claps them together in order to hop across the bottom of her tank, in the Sea Star aquarium in Coburg. "She leaps over the seabed like a frog rather than swimming gracefully like most sharks," said Peter Faltermeer, a marine biologist and the aquarium's curator. The scientists, he said, were confounded. "They were all left totally baffled and we were left delighted," Mr Faltermeer said. "They couldn't classify her. Cuddles is unique and she belongs to us."

The shark's former home, an Austrian zoo, gave her to the aquarium, not realising her rarity. The Sea Star is now in the process of choosing a Latin and English name for the new species. "This is the first time a totally new species of shark has been found not in the wild but in a fish tank," he said. "It is amazing."

He believes that because Cuddles does not have sensory organs at the front of the head, as do other sharks, she uses the bristles that cover her from head to tail to provide an early warning of possible predators, or prey. "She lets algae grow without trying to rub it off, which is gradually turning the bristles bright red," said Mr Faltermeer. "We believe the bristles pick up movements in the water, and the algae helps to thicken the bristles and lengthen them." Unlike other sharks, the iris of Cuddles's eyes is fixed open. She also has abnormally wide nostrils and a fifth gill that is designed to filter plankton. "Other sharks filter plankton, but these don't also chase fish," he said. "But Cuddles has a full set of teeth and the main ones are extraordinarily long.

"She seems to eat anything. We've tried squid, red bass, krill and trout, and she eats it all. She also has an enormously strong bite for her size. She can bite through things other sharks would have problems with."

He believes that the shark has adapted to living and hunting in the dark - probably in a cave rather than in deep water. Most of the biologists believe that Cuddles came from somewhere around southern Africa.

"The eyes that are not designed to cope with light, the allbody hair, the wide nostrils and the way she uses her fins more like legs all indicate she is used to a dark cave environment. "Caves often have rich sources of plankton, which might suggest why her body has undergone such adaptations."

The aquarium would like to find Cuddles a mate as she is believed to be fully grown, but must first narrow down where she came from in order to search for a similar match. So far she has proved less than maternal: when nurse sharks who share her tank laid eggs, Cuddles ate them.

While the shark is now a popular sight at the Sea Star aquarium, it has taken many years for her to be fully appreciated. Asked how it had managed to give away such a rarity as a hairy hopping shark that dyes its hair red, the Schonbrunn Zoo in Vienna denied making a mistake.

"We are not embarrassed," said the zoo's spokesman Dr Ekkehard Wolf. "We get thousands of exotic animals every year. It is not possible to categorise them all."

He admitted, however, that they had kept Cuddles in a tank for two years without putting her on public display. They had been relieved when the Sea Star offered to take her away.

Before the zoo took her in, Cuddles had been held at an animal rescue centre. It took her in after the centre in which she'd been on display shut after it was flooded. The owner of the centre apparently bought the shark from a pet shop, whose owner said he couldn't remember where a single baby shark had come from four years earlier.

Mr Faltermeer said: "The Austrian zoo experts should not feel too bad. Where they kept her, you could only see her from above. To be honest, when I first saw her when she was delivered I thought she was an ordinary nurse shark.

"It was only when we got her in the aquarium and saw her from the side that we realised she was special."

http://news.telegraph.co.uk/news/main.jhtml?xml=/news/2004/08/29/wshark29.xml

### EXPEDITION TO SHED LIGHT ON "UNDISCOVERED" REEFS

Geoscience Australia says there is evidence suggesting there could be undiscovered coral reefs in the Gulf of Carpentaria. Three submerged living coral reefs, covering 80 square kilometres, were found in the Gulf last year, which was a significant find for the region.

Marine Geologist Dr Peter Harris says another expedition in February 2005 may shed more light on other reefs. "We've also been preparing a proposal to go back to the southern Gulf and to take more detailed samples to try and verify the compositions of the reefs, proving that they are coral reefs or not," he said. "Also so we can get samples to date, so we can find out when these coral reefs actually were alive." <a href="http://www.abc.net.au/news/newsitems/200408/s1182647.htm">http://www.abc.net.au/news/newsitems/200408/s1182647.htm</a>

## For Sale, Swap and Wanted to Buy....

#### FOR SALE:

10 foot tank, skimmer, calc reactor, lights, rock, fish for \$2000

Contact **Terry Peake** at <u>terry@auscyber.net</u> if you are interested.

#### FOR SALE:

2ft cube tank on pine cabinet with hood & 32mm overflow in tank - **\$250 ono** 

Tank 120cmW x 100cmL x 70cmH with tapered front on sandstone look cabinet with hood. Tank has 2X 40mm holes for external sump **\$450 ono**.

Contact **Paul Groves** on **0421 803 288** if you are interested.

#### FOR SALE:

Acrylic tanks – suitable for algal and rotifer culture. Contact **Nigel Clark** on **0412 412 681** if you are interested.

#### **WANTED TO BUY:**

Second hand Chiller to fit 250 Litre tank Contact: **Andrew Brandreth** on **0423 801 552** or email bsa@powerdsl.com.au.



#### http://www.reefonline.com.au



As part of the sponsorship agreement with MASWA, Reef Online are offering 10% discount to MASWA financial members on everything in the store. This is not an introductory offer, this offer will be in place for as long as the agreement is in place!

Reef Online prides itself on selling only the best in Aquarium equipment, such as AquaFX Water Filters, Korallin Calcium Reactors, AquaC Protein Skimmers, Salifert Test Kits, and only the best book titles... many of which are not available anywhere else in Australia!



Check us out at <a href="http://www.reefonline.com.au">http://www.reefonline.com.au</a> and see what all the fuss is about!

No web access, no problem... give Natalie a call on 0408 530 934!



## MARINE WEST

#### http://perth.citysearch.com.au/E/V/PERTH/0057/37/10/1.html

Welcome to Marine West. With over 20 years combined experience, Paul & Danuta Williams are specialising in creating exciting living reefs for your home or office.



Address: *Unit 1, 29 McIntyre Way, Kenwick, WA 6107*Opening Hours: *Tue - Sun 10:00am - 5:00pm* 

Tel/Fax: (08) 9493 0966 Email: pjwdrw@bigpond.com

Advertisements in The Living Reef do not necessarily reflect MASWA's endorsement of any product, service or advice offered by the advertised business. If you would like to advertise in The Living Reef, please contact Nigel Clark (Social Coordinator) on 0412 412 681.



## Membership Application / Change of Details Form 2004/2005

Office Use Only		
<b>☀</b> Membership No.	★ Application Date: / /	
# Annual Membership (pro-i	rata for remaining months of the calendar year @ \$2 per meeting):	
General - $\$24   heta$	Country/Associate - \$12 $\theta$ Pro-rata - \$ $\theta$	
Items below marked with a * are mandatory.		
Name (Family Name must be	e included <b>)*:</b>	
Address*:		
Postcode*:		
Telephone No. (H)*:	Telephone No. (W):	
Mobile No.:		
Email Address (no Hotmail	addresses):	
I wish to receive the MASW	/A Newsletter via*: Email θ Post θ	
Answering the following questions is not mandatory, but it does help the society in preparing articles, presentations and tours for future newsletters and meetings.  Where did you first hear about MASWA?  How many marine aquariums do you have?		
Would you like one of the experienced MASWA members to guide you in setting up/improving your aquarium? <b>Yes</b> $\theta$ <b>No</b> $\theta$ Is there a particular area of marine aquaria that you feel you need help with/more info. on?		
What are you hoping to gain by joining MASWA?		
Date*:	Signature*:	
	e to the MASWA treasurer, <b>Paul Tayler</b> 5 1664 (please include vour name on all EFT transfers!).	

Send applications to: MASWA Membership Applications
C/o Paul Taylor

C/o Paul Tayler PO Box 7185

Shenton Park WA 6008