

Sea Star



February 2008

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Changing of the Guard

By Shane Heil

Each December the Wasatch Marine Aquarium Society holds annual elections to choose officers for the coming year. This past December was no exception and we have several new presidency members and new roles to announce. Please support each of these volunteers as they work to make your club experience great in 2008.

2008 Presidency Members:

- **Shane Heil – President, SeaStar Editor**
- **Will Spencer – Vice President, Treasurer**
- **Adam Blundell – Guest Speaker Relations, Club Historian**
- **Debbie Morrill – Donations Coordinator**
- **Amy Newbold – Special Events Coordinator**
- **Jake Pehrson – Webmaster**
- **Corey Price – Tank of the Month**
- **Dion Richins – Merchandise, WMAS Store**
- **Eva Rushton – Public Relations**
- **Mike Savage – Membership Coordinator**
- **Shane Silcox – Merchandise, WMAS Store**
- **Shawn Winterbottom – Asst. Webmaster**

If you'd like to learn more about the 2008 WMAS presidency members, visit our Presidency page at <http://www.utahreefs.com/presidency2008.asp>

Additionally, if you have suggestions to improve any aspect of the club, feel free to contact the presidency member that oversees that function. You can also post your improvement ideas in the 'Recommendations' forum on the utahreefs.com message board. Each recommendation is reviewed by the presidency to determine if the improvement should be implemented.

We're looking forward to another great year for the WMAS. We have many ideas to enhance your club experience. Watch the message board for announcements and for opportunities to get involved. We are always looking for people to volunteer their time to help with club meetings and activities. Remember, it's your club – help make it a success!

Did you know ?

Phycology, also called algology is the study of algae. Phycology is from the Greek phykos or "seaweed"; algology is from the Latin alga, or a "sea wrack."



January Meeting Recap

By Adam Blundell

Meeting Date: 1/03/08 Attendance: Over 100 adults

This club meeting was a super success! Thanks to everyone pitching in with corals, great local store sponsors, fraggers, and people with money in hand, we raised some much needed funds for the club. This will certainly help us to bring in more world class speakers and produce some great meetings in the next few months. We started the night with 55 paid members (which are amazing for starting a new year) and sold another ~28 memberships (around 40 memberships total this week! Way to go everyone! We over filled the parking lot and that was something to complain about. By 7:00pm we had overflow parking into the park and the high school, our largest turnout in a year.

Club Announcements

Thanks to so many coral donors!!!! We had several club members (around 15) donate corals for the meeting. Plus some stores kicked with donations including The Aquarium, Aquatic Dreams, BST Aquatics, Fish4U and Reef Kingdom.

Tank of the Month

This month we featured Greg Wilke (PinnerReef). This tank is an 8 gallon corner pentagon. What is most unusual is that Greg built the tank himself (he previously worked in the glass business). It was great to see what can be done with some imagination, especially in only 8 gallons.

Coral Corals Corals

We had 6 corals for a silent auction. These corals were picked out as the best corals that we just couldn't bring ourselves to frag.

We had three corals used for demonstrations. They included mushrooms, finger leather, and a tile saw used to cut up a moon coral.

There were hundreds, yes hundreds of coral frags for sale. These frags were labeled with a two letter symbols (like NN for Neon Nephthea) to help make buying easy. Also, they were color coordinated for sps, lps, and softies. Thanks to the Aquaterrial Education Station for allowing us to use their place for all the prep work. And boy was there some prep work. Let's start by mixing up 50 gallons of water – then transporting some of that from West Jordan to Centerville. Have you ever taken 100 frag bags and 100 rubber bands and said "here we go? " Think your hands are sore from tying rubber bands that is nothing compared to coral and invert stings. This year a few people were wearing gloves, although not the main fragger himself (Shane H). After Jake's trip to the InstaCare last year from a fireworm incident you'd think Shane H would be more careful.

For several days leading up to the event corals were being collected (Thanks Sukie!) and plans were made on how best to run the show. It took 7 people 5 hours to get all the pre-fragging done. Thanks to Shane H, Will, Jamison, Adam, Jake, Shane S and Corey for giving up a day to do this.

Next Month

Next month, we'll feature Dr. Fred Lipschultz as our special banquet speaker.

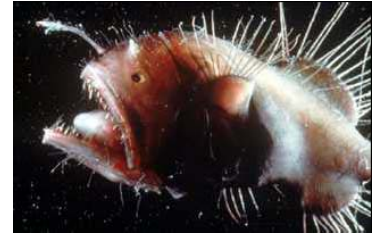


At a Glance: The Deep Sea Anglerfish

By Monique Turner (reprinted from the Oct. 2000 edition)

The deepest part of the ocean, starting at 1000 meters, is called the bathypelagic region. This area makes up 75% of the ocean. The sparse fish population, combined with the large area, makes a mate difficult to come by. The ceratoid anglerfish has found a unique way to ensure survival of the species.

The female anglerfish dwarfs the male by 10 or more times. The male searches out the female, some taking years to finally find one. Once he does, he grabs hold of her side with his beak-like mouth, never to part again. How strange!



As he continues to hold tight, his mouth tissue fuses with her skin, forming a permanent bond. Once the fusion has taken place, the male's internal organs degenerate as their circulatory systems intertwine and become one. The only thing that gets bigger in the little male is his testes. They continue to grow until they take up almost half his body. Now he is nothing more than a small parasitic bump on the female's side, to provide sperm as required.

The story ends with the female having 2 or 3 males following her every move, every whim, in life and death.

Raising Anemonefish – Part 4

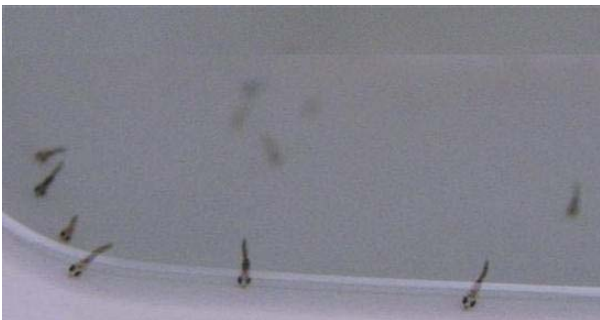
By Amie



Caring for Larvae

Anemonefish larvae change into juvenile fish sometime during their second week after hatching. This is called metamorphosis. The actual days for metamorphosis depend on the species of anemonefish. For example, perculas usually metamorph starting on day 8 and finish on day 10. But maroon clown's can start as late as day 10 and end on day 13-14. Before they change, they look like tiny little black dots with tails. After they change, they look and swim like little baby anemonefish. Once they reach about day 20-25, they have developed (or lost, depending on the breed) most of their stripes and they are significantly less fragile and can then be treated like young fish.

From the day the eggs hatch until about day 25, everything you do revolves around the two things the larvae and juveniles need to survive: good nutrition and good water quality. I have made a chart that I follow in order to get through these first 3 weeks. I hope that the items I won't be talking about in the chart are pretty self-explanatory.



Anemonefish larvae – day 1 (almost transparent)



Larvae during metamorphosis. By morning, it will have changed to a juvenile



Juvenile anemonefish – day 10

	Transfer larvae from parent tank	Lower salinity to 1.018-1.021	Metamorphosis	Take off black paper	Water Quality				Food						
					% Change	Add additional saltwater*	Vacuum bottom in am	Add HOB Filter	enriched Rotifers	Flake	Golden Pearls/otohime	Enriched Baby Brine	Other frozen foods	keep phyto in tank	
Day 1															
Day 2															
Day 3					20%	increase water level to at least 6 gallons over this time									
Day 4					20%										
Day 5					20%										
Day 6					20%										
Day 7					20%										
Day 8					20%										
Day 9					10%							optional			
Day 10					10%							optional			
Day 11					10%							optional			
Day 12					10%							optional			
Day 13					30%										
Day 14															
Day 15					30%										
Day 16												No			
Day 17					30%										
Day 18															
Day 19					30%										
Day 20															
Day 21					30%							a little larger			
Day 22															
Day 23															
Day 24															
Day 25												No			

* When adding water, it is best to drip the water in slowly and keep an air bubbler in the new water in order to maintain constant pH.

Note: Keep temperature in larval tank at 80-82 degrees Fahrenheit



Water Changes

I think the chart is pretty self-explanatory, except a little should be said about water changes. I cannot stress enough how fragile the larvae are the first 8-10 days of their life. Whenever water is added to the larval or juvenile tank, water should always be dripped into the tank. Any sudden changes to their environment can quickly kill them. I find that drip irrigation attachments from a local garden center work well on an airline hose and I can use different attachments depending on how fast I want the water to enter the tank. For example, when I am working with larvae, I drip the water in at a rate of 1 gallon/hour. As they get older, I move up to 2 gallons/hour, then 4 gallons/hour, etc.

If you are adding a lot of water to the tank, and dripping it over a long period of time, it is a good idea to put an air bubbler in the incoming saltwater. This will keep the water from sitting stagnant and the pH dropping.

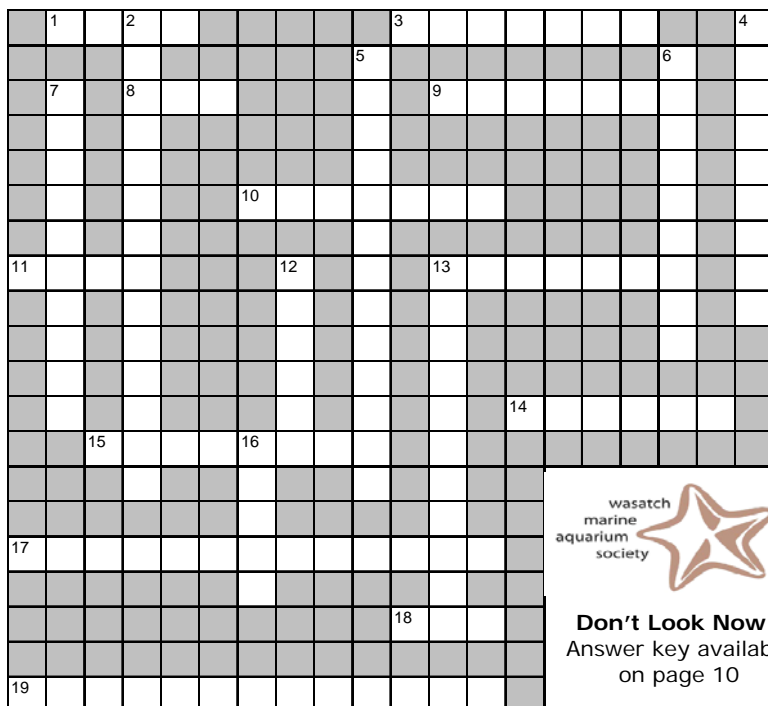
When siphoning water out of the tank, always use a filter to prevent the larvae from getting sucked up into the tubing. I use a brine shrimp sieve that floats at the top of the water and then siphon water out with a small airline hose.

Final Notes

As I stated before, this is my method and there will always be room for improvement. If I could go back and rewrite the first 3 articles in this series, they would be totally different because my methods have already changed. Even though Wilkerson's Clownfish book is the bible for clownfish breeders, there continues to be new and improved methods for raising the food or for increasing the survival rate of the fry. Always do your own research and find the latest methods for the highest success possible. But most of all ... have fun!



A WMAS Crossword



Don't Look Now !
Answer key available
on page 10

Across

1. Animated hepatus tang
3. Foam fractionator
8. Very high output
9. Water flea
10. MACNA XX host city
11. Tiny tank
13. A cardinal in black & white
14. Gap beneath your DSB
15. Newbie's delight; veteran's bane
17. Favorite fragment fixative
18. Baby fish
19. An elegant genus

Down

2. Backwards diffusion
4. Hawaiian spear poison
5. Single celled symbiot
6. 3rd most abundant ion in seawater
7. CAO_H2 – auf Deutsch
12. Clam foot
13. Killer echinoderm
16. Sweet & Sassy Richins



Kids, Fish and a Fun Saturday Afternoon

By Tim Hemingway

It's Saturday afternoon, the kids are bored and whining. "We want to do something!" You ramble off a list of every toy, game and movie you have purchased for them in the last three years, but for some reason none of these will suffice... I'm sure this scenario sounds all too familiar to the readers who are parents. My wife Katie and I ran into this same scenario recently as we were baby sitting our nephews Ethan and Jake for the weekend.

We decided that instead of taking the easy solution of running them to the local dollar theater, we'd try something different. Something a little bit more meaningful and hopefully something they'll look back upon as a great time with Uncle Tim and Aunt Katie.



We loaded the kids into the car, headed north on I-15, and about 30 min later we were pulling into The Living Planet Aquarium parking lot. For those of you who are not familiar with The Living Planet Aquarium, it is located in Sandy at 725 East 10600 South. Although the current location is relatively small, and the displays are limited, it is considered a preview to get people excited for the 90,000 square foot facility they are planning on building in Salt Lake City. That being said, don't think that the current location is not worth visiting, because it is (Katie and I have been twice). As Katie explained to me, the current location contains a collection of the species that people really want to see; stingrays, jelly fish, sea horses, a giant octopus, and of course sharks!

Within moments of entering, we knew we had made the right choice in bringing the kids to the aquarium. The kids were full of "oooooh's" and "ahhhh's" as they walked from display to display, and that was while we were walking through the Utah Waters exhibit; trout, bull frogs, brine shrimp and so on. The real excitement started when we walked into the Ocean Exhibit. I will tell you, there is no better feeling than hearing your deaf nephew yell with a voice full of excitement "**Tim, Oclapushhhhhh!!!**" (octopus is one of his favorite big words).

Both Jake and Ethan loved the petting tanks; they couldn't get enough of the chocolate chip sea star, sea cucumber, or the stingrays, not that either of them actually ever touched a stingray. They would lay on their stomachs on the wall surrounding the tank with their little hands in the water, but as soon as a stingray would get close they'd pull their hand out with a high pitch shriek. This was possibly my favorite thing to watch.

To say the least, the trip was a success. For the rest of the day we listened to the kids repeat words like fish, octopus, and shark, and watched them make the ASL signs for the animals. Not only was this an enjoyable experience for everyone, but it was also a great educational experience. So next time you're spending a Saturday afternoon with whiney kids, why not take them out for an experience they won't forget... Plus, if the exhibits don't stop the whining you can always threaten to feed them to the sharks.

For more information on The Living Planet Aquarium visit www.thelivingplanet.com

Did you know ?

The deepest trench in the ocean is the Challenger Deep, in the Mariana Trench, located in the western Pacific near the Mariana Islands, east of the Philippines. The latest measurement places its deepest point at 38,635 feet (approximately 7.3 miles) below sea level. To compare, the tallest point on Earth, Mt. Everest, measures about 29,022 feet above sea level.



Generators – Worth It or Not?

By Crystal Stock

This question seems to come up quite often in the reef keeping hobby. There are always posts from people asking what they should do in case of a power outage, or the sad posts of people who lost quite a bit of livestock due to a power outage. Coming from Ohio where we lose power quite frequently but generally not for more than a few hours. I would say it is very stressful at the least to *NOT* have a generator. They are so cheap nowadays I can't see why everyone with a tank wouldn't own one, especially those who have invested thousands into their beloved reef tanks.

Reasons *not* to have a generator:

- They cost a bit of money (\$400.00 and up)
- They have to be manually turned on and set up with the cheaper models
- What is the point in having one if the power only goes out once a year

Yes they do cost money, but lets breakdown how much we have invested into our reef tanks. I'll use my 72 gallon bow-front as an example because it is a large tank, but not huge, which I think represents most of the people here in Utah. I am only going to go through the prices of livestock in the tank, as this is what would be lost, and not equipment. So, it would cost me roughly 1, 355.00 to replace all of the livestock in the tank. This isn't even including the mental anguish that comes with losing a whole tank. Those of you who have had it happen know what I am talking about. Many of us get very emotionally attached to our fish, corals, and tanks in general. Losing a whole tank is enough to get out of the hobby.

When the power goes out we lose our heaters and return pumps. Yes, they do make battery-operated bubblers that you can buy to keep oxygen in your tank, and yes they do rent out generators at places like home depot. The bubbler will add oxygen, but it will NOT run your heaters. A rental generator is a good option but how many people are running to Home Depot to get these in your dire time of need!

The bottom line is a decent generator is going to cost you around \$500.00. This is less than half the cost of what it would take to replace everything in an average tank. There is nothing like having peace of mind in a power outage. Your tank will thank you, and you'll thank yourself for being so smart to do the shopping around for good deals before you have to buy one in an emergency.

Type of Livestock/Coral	Cost
Purple Tang 3"	\$70.00
Orange Spot Rabbitfish 4"	\$40.00
Blue-Eye Kole Tang 3"	\$35.00
Yellow Belly Hippo Tang 3"	\$75.00
Mated Pair of Maroon Clowns	\$100.00
Pair of Banggai Cardinals	\$45.00
Pink Spot Shrimp Goby	\$20.00
Cleaner Shrimp	\$20.00
Peppermint Shrimp (five)	\$25.00
Various Snails and Hermits	\$100.00
Bubble Tip Anemone	\$25.00
Frogspawn (20 heads)	\$100.00
Hammer Coral (10 heads)	\$100.00
Grouping of All Other Various Corals (I went through them all and priced them)	\$600.00 (this is on the low end)
Total for All of Livestock in Tank	\$1,355.00





What size generator do I need?

In an emergency you would only need to run the essentials. I could run my return pump, both koralia 4's and my 300w heater very easily with a small generator. If your going to spend the money you can go a little bit more and get something that will run your fridge, heater, a/c etc. I found this one at Wal-Mart for a reasonable price:

http://www.walmart.com/catalog/product.do?product_id=6487122

This particular model has 2500 operating watts that would be more than efficient to run my tank in an emergency, and at \$297.00 that is a small price to pay to save my \$1400 in livestock. The Wal-Mart here has a 5000-watt generator right now for \$453.00. This would pretty much run anything I wanted short of central air. For those of

you that would like to figure out how large of a generator you would need to run other appliances in your home also here is a great link to help you out!

<http://michaelbluejay.com/electricity/howmuch.html>

Hopefully I have helped everyone in deciding if a generator is right for you or not. Most of us have a lot vested in our tanks and this is a small price to pay to save them in the event of a power outage. These can often be found for sale used at much cheaper prices. Keep an eye out to get a good deal. Oh yeah, and save the fishes - they can't save themselves.



Did you know ?

Portable generators use an internal combustion engine that emits deadly carbon monoxide. Be sure to place the generator where exhaust fumes will not enter the house. Only operate it outdoors in a well-ventilated, dry area, away from air intakes to the home, and protected from direct exposure to rain and snow, preferably under a canopy, open shed or carport.



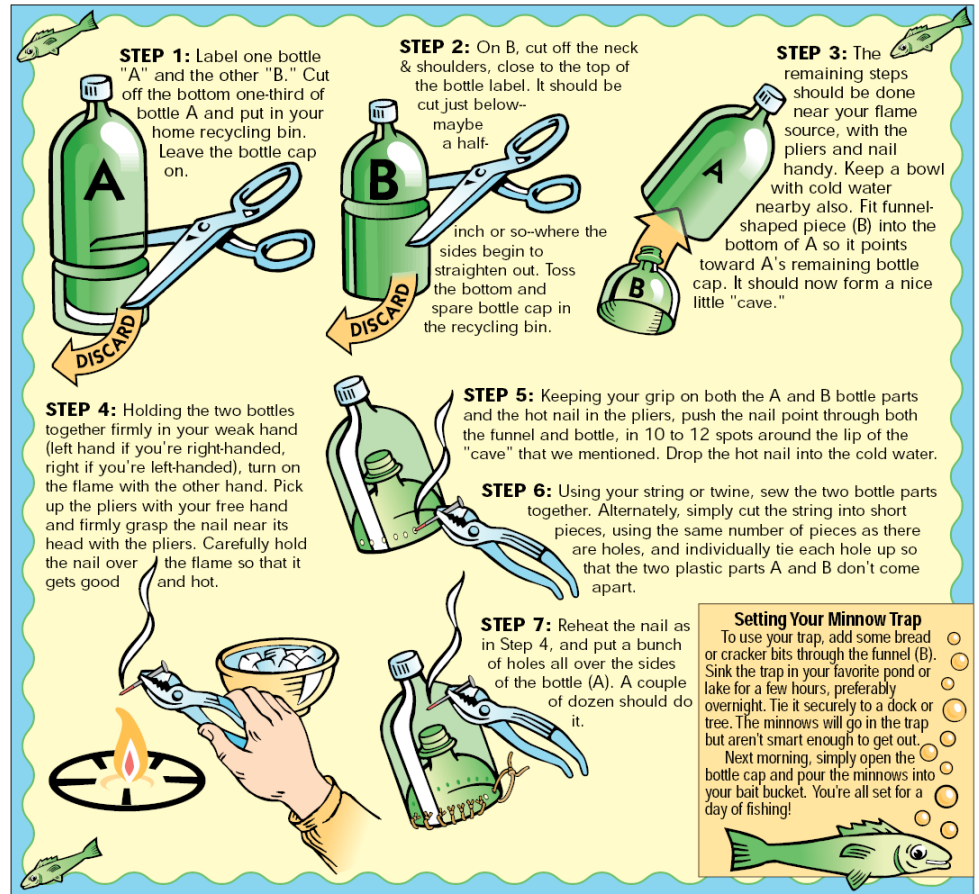
Fish Trap – Boy Scout Style

By SeaStar Staff

Recently Brandon Bauman has begun an effort to compile many of the useful threads available on the WMAS message board. Many of these topics are old news to veteran hobbyists but to neophytes, this information may prove invaluable. I thought it worthwhile to take a closer look at these topics and provide a bit more information where possible.

As I was searching for an illustration of the simple 2-Liter fish trap, I came across a graphic that explains the process nicely. Your fish trap may not need to be so elaborate, but the step-by-step instructions provided by the Boy Scouts of America should enable even the most DIY challenged aquarist to create an inexpensive, yet effective trap to catch any smaller, unwanted fish.

The use of the trap in your aquarium is very similar to that used to catch minnows in a pond. Place your fish's favorite food through the funnel and sink the trap in your tank. A few small pieces of rock may be necessary to hold the trap in place.



Instructions courtesy of Boy's Life Magazine – Author: Oliver Shapiro

Here again is the time for patience. Fish, as a rule, do not like to get caught. You may have to leave the trap for an extended amount of time before the targeted fish takes the bait and enters your trap. Don't forget Murphy's Law will be in full affect. Plan to catch nearly every other fish, shrimp and crab in your tank ahead of your intended target.



For convenience sake, create a small hole in the top of the trap. Thread enough monofilament fishing line through the hole to extend up and out of your tank. Once your prey has been successfully caught, use the fishing line to pull the trap to the surface where you can gently remove the fish without even getting your arms wet!

This method has been used successfully by many hobbyists to remove smaller fish from their aquariums. Before you tear your aquarium apart, try this simple and nearly cost free solution to remove those pugnacious beauties. Good luck.

http://www.utahreefs.com/forum/forum_posts.asp?TID=23068

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WMAS Crossword Answer Key

Did you know ?

The earliest known aquarists were the Sumerians, who kept fishes in artificial ponds at least 4,500 years ago; records of fish keeping also date from ancient Egypt and Assyria. The Chinese, who raised carp for food as early as 2000 BC, were probably the first to breed fish with any degree of success.

So You Wanna Write for the Sea Star ...

By Shane Heil

Don't be shy - become a part of the Sea Star! We are currently looking for authors to share their fish keeping experiences. Writing for the Sea Star is a great opportunity to share your expertise. Articles do not need to be lengthy and they don't need to be filled with technical data. Take a look at the short list of topics that was recently suggested on the WMAS message board. With your help, any one of them could become a great article for our newsletter.

If you have any questions about the Sea Star or to submit an article, please contact Shane H for details.

e-mail: shane.heil@autoliv.com
 telephone: (435) 720-2599
 message board: Shane H

- Have you had success raising baby fish?
- Are you keeping corals that most only dream about?
- Do you have an aquarium related experience to share?
- What about your last vacation - did you visit a public aquarium or spend time at the beach?
- Did you build your very own reactor, light timer or top off system?
- Do you have a favorite fish or invert and can't wait to show others?
- Have you recently come across some helpful info to improve your aquarium hobby?
- Do you have a maintenance schedule that keeps your tank sparkling clean?
- Are you building the "ultimate" aquarium system?
- Did you buy some equipment or product that has been surprisingly good or that completely sucks?
- Do you want to learn more about the husbandry of a particular coral?
- Have you successfully cured an aquarium malady; redbugs, aiptasia, flatworms, hair algae, cyano, etc?
- Are you volunteering by helping take care of a tank in a school, nursing home, or other location?
- Do you have a favorite aquarium book that others might have overlooked?
- Are you a freshwater expert making the leap into saltwater?
- Do you have other, unique pets (other than cats and dogs) that you'd like to show off?
- Do you love sushi? Do you have a favorite sushi joint?
- Did a club member come to your rescue when your tank (insert emergency here) and you want to tell the story?

