

# OCTOPUS

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## CLEVELAND SALTWATER ENTHUSIASTS ASSOCIATION


February 2004

The **Cleveland Saltwater Enthusiasts Association (C-SEA)** is a non-profit, educational organization to promote the art and science of marine aquarology. General meetings are held on the third Friday (usually) of each month at 7:30 pm. The official publication is the **OCTOPUS**.

 Advertisers help the club by defraying the cost of printing and mailing. **C-SEA** believes in supporting the local saltwater shops and the companies who support us with advertisements, discounts and donations.

 Opinions expressed by the authors do not necessarily represent those of **C-SEA** or its membership.

 We reserve the right to edit submitted articles.

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## Editor's Notes

This month we have Part II of *Moving an Established Marine Tank*. Part II focuses on moving into the new (or relocated) tank.

I hope you enjoyed last month's DIY article regarding building a Durso Standpipe. This month we have another DIY project, *A Simple DIY Kalk Dripper*, documented by Agu Lukk. Agu is a moderator on ReefCentral.com and contributes great insight to the various DIY threads on that site. I hope you find it interesting.

For those of you who missed last month's meeting, Dr. Mark McDowell spoke to us about his experience with the Great Blackout of 2003. To make a long story short, he attributes his losses (approximately \$15,000 retail) to his deep sand bed (DSB) and the subsequent crash of the DSB when his battery backup was all used up and he had no aeration or water movement in his tanks. With the spring storm season quickly approaching, it may be a good time to reassess your tank and the dangers that lurk within!

Finally, this month looks to be a busy one. Back by popular demand, the February meeting will be a Members Roundtable, with special emphasis on DSB's, Crisis Management, the 5 W's of Clean-up Crews and "There are no dumb questions!" Also, the next day, promoted by C-SEA and CORA is the 6th All Ohio Frag Swap at the Salty Critter.

By the way, you'll notice in the Upcoming Meetings section, we've added a June Meeting. Many of you have mentioned expanding our meeting schedule, and the Board aims to please!

Also, with the proliferation of local and regional frag swaps, the Board recently appointed Steve Seal as the C-SEA Frag Swap Liaison.

John Fay, Editor

## Calendar of Events

**February 20th** - back by popular demand - **Members Roundtable** (open to everyone)! Featuring the following topics: DSB's, Crisis Mgt., The 5 W's of Cleanup Crews, and "There are no Dumb Questions"!

**February 21st** - Promoted by C-SEA and CORA - **6th All Ohio Frag Swap**, 1-4pm, at The Salty Critter, Vermillion

**March 19th** - Marineland Speaker's Series - **Joseph Yaiullo**, General Curator of the Atlantis Marine World Aquarium, Riverhead, NY

**April 16th** - Tentative - **Sanjay Joshi** - Curator HUB-Robesin Aquarium at Penn State

**May 21st** - **Annual Elections - Spring Raffle** - Tentative Members Garage Sale!

New for 2004 - **June 18th** (Yes we are trying a summer date!) **John Janda - Working with Acrylics**

### **C-SEA Article Submission**

Submit articles detailing your experiences, ideas, or innovations. Anyone who has two regular articles published in the Octopus in a two year period will receive a free year's membership. Send submissions to John Fay:

E-mail address: [rjsfay@cs.com](mailto:rjsfay@cs.com)

Mailing address: 5462 Weeping Willow Drive, Hudson, Ohio 44236



# **MOVING AN ESTABLISHED REEF TANK**

## **Part 2 - Moving In**

**by Marty Ziegler**

**First published in *Gravel Gossip*, Diamond State Aquarium Society  
Aquarticles**

Remember, there is no need to rush. Take the trip home real easy, avoiding quick stops, potholes, and sharp turns. When you reach your destination, reverse the order. Remove the livestock first and get them inside, along with the water containers. I like to leave the tank outside to be cleaned up a little later. Position the tank stand in its new location. Bring in the remaining items, some of which will need to be cleaned up before using. If you are moving into a new tank, you should have it already in place.

At this point, you need to get the livestock situated in a stable environment from their long journey as soon as possible. Start changing over the water in the quarantine tanks with the original water from the moved tank. I usually use 50 to 100% of the original tank water, depending on the water temperature and other parameters of both the old and new water. If you did your homework, they will be about the same. Try to use mostly the old water, with the quantity of new water equivalent to a normal water change, about 10-20%. The percentage used will depend on the difference in both water temperatures and the condition of the old water. If the temperatures are close (within 5 degrees), start floating the bags of fish and invertebrates in the quarantine tank. If you are using a new tank, try to use as much of the old water as possible, up to 80%, adding freshly mixed salt water for the remainder (you should have already mixed this up the day before). Drain the original tank filters from the move and rinse out the bio-media in the old tank water. You will want to get the filters up and running on the quarantine tanks as soon as possible to save the bacteria contained within. Hook up the wet-dry, if there is one, and protein skimmer on the quarantine tank and get them running as soon as possible. If you are using a new tank, hook everything up to this tank. If you have new filters, seed these with the media from the old filters. At this time, you need to acclimate the livestock to the quarantine tanks and get them out of the bags. If the temperature and water parameters are the same, and the water is 80% or more of the original tank water, it shouldn't take more than 20-30 minutes, adding some of quarantine tank water every 10 minutes. If there are any differences in the water parameters or the length of time in the bags is more than a couple of hours, the acclimation time should be extended accordingly. Keep the lighting off for at least the balance of the day on the quarantine tanks. Make sure there is plenty of water flow in the tank with the corals. I prefer to keep the corals in a separate quarantine tank from the fish. You will also need adequate lighting, depending on the particular type of coral, by the second day. Generally, the less the fish are disturbed during this period, the better. Feeding should be held off to the next day.

Add some of the original tank water to the 32-gallon plastic trash

container and start placing the live rock in the bottom. I run a three-foot length of rigid plastic tubing to the bottom of the container and hook it up to an air pump for aeration. Then, place a powerhead along the wall of the container to move the flow of water in a circular motion. You can fill this container up to halfway with rock and the live rock will keep for quite a while, until you are ready to move it into the main tank. Depending on how much live rock you have, you may need more than one container. Keeping these containers loosely covered will reduce evaporation. You will need to clean the live sand or gravel by rinsing it in the original tank water from the move, and placing it in one of the 32-gallon containers, using the same set-up as the live rock. During the next several weeks, you will start doing 10% water changes every 3-4 days, until the new tank is completely set up. Keep an eye on the fish for any signs of disease or parasites and treat accordingly. If you need to treat the tank, make sure there are no invertebrates in the tank and remove the bio-media to another tank. Only run a sponge filter in the tank for the period of treatment.

Now you have the time to clean up the moved tank and equipment, and set it up the way you want. Once you have the tank and equipment in place, add freshly mixed saltwater and start the system running. Get the temperature stabilized over a couple of days, then add the live sand or gravel. After about a week, add the live rock. At this point, I would move the wet-dry filter, if there is one, to the relocated tank, and get the protein skimmer running. After a few more days, you can gradually start adding in the fish, but spread this over a week or two. Any starfish, hermit crabs, snails, etc can be added at this time. The corals can be added about a week after the fish, spreading them out over a week or two. The lighting will need to be in place and working at this point.

If you are using a new tank, and the old tank was maintained properly and the livestock is in excellent health, then you can set everything up on the new tank, get the old filters running, add the gravel and live rock, and add the fish and corals after everything settles, all in the same day. Just be careful how long the livestock is in the bags, as the water will deteriorate. You may want to add fresh air to the livestock bags. Keep a close eye on the water parameters, especially ammonia, nitrite, and nitrate, during this entire period. If you take your time and don't try to rush the process, you will not have a problem. If there is a problem, correct it immediately before proceeding with any more additions. If the tank you moved was overstocked to begin with, you will need to remedy this situation by giving away some of the livestock, or setting up an additional tank. You do not want to overstock the new tank during this break-in period.

If you followed the above procedure, your tank should be fully up and running within a month. It is crucial that you do not rush this or take shortcuts. This procedure has proved successful for a number of moves, including a 55-gallon, a 75-gallon and two 125-gallon reef tanks. Good luck with your next move, and let me know how it went!

## A Simple DIY Kalk Dripper

by Agu Lukk

Perhaps you've read in a book or magazine, or maybe read it somewhere online, that you need to "drip kalk" as your makeup water. Everyone makes it sound so easy that you really don't want to ask how to actually do it. You're wondering if it's expensive, is it difficult, and is it dangerous to your tank? The answers in order are: no, no, and no. When finished reading this article, you'll be confidently dripping kalk like a pro.

You'll need a few tools: a drill, drill bits, scissors, and a hacksaw blade (optional).

You'll also need some supplies, so make your shopping list. The first stop in this shopping spree will be the grocery store, where you'll be buying your container, pickling lime, and measuring spoons. First, the container needs to be food grade, preferably made of plastic as glass gets to be too heavy, and secondly, it should have a screw-on plastic cap. Various sizes of bottled water or sports drink containers work well. Next, get some pickling lime, if they have any in stock. If they don't have any, that's not a problem; a suitable substitute can be found at our next stop. Finally, buy a set of plastic measuring spoons. Get the types that are long and thin, as they will have to fit in the mouth of the container.

The next stop is the local fish store. If pickling lime wasn't available at the grocery store, buy some kalkwasser powder here. You'll pay more, but what the heck, at least they have it in stock, and this project is generally so cheap that you can afford to splurge. Additionally, a length of rigid tubing will be needed; I use 3/16" thin wall tubing. You'll also need flexible tubing. However, before buying it, be sure it fits over the rigid tube easily but snugly. I've found most local fish stores stock flex tubing that is just a little bit too small and difficult to work with, so I stop by the local hardware store and get their flex tubing. The final item to pick up from the local fish store is a small package of plastic airline valves.

So now you have your supplies...



*From top left: airline valve kit, Ball's pickling lime, the container, flexible airline tubing, rigid airline tubing, and measuring spoons.*

...and you're looking at this conglomeration of stuff and wondering what's next...

Grab the drill! The cap needs to have two holes drilled in it (see below). In my own case, I used a 7/32" drill bit. A bit of advice... before drilling the top, find a scrap piece of plastic and drill a test hole to confirm the flex tubing fits snugly. Once the correct bit size is determined, drill two holes in the cap, making sure they aren't too close to the edge, since the cap needs to be able to screw back onto the bottle.



*Note the position of the holes in the cap.*

The manner in which to assemble the actual dripper depends on the container used and where it's located relative to the tank. For example, the length of the tubing is dependent upon how far the container will be located from the point you've chosen in the aquarium to dose the kalkwasser. In all cases, however, the down-tube inside the bottle should be about 3/4" above the bottom. There will be some residue that settles out and you don't want to add that to your system. I use rigid tubing on the outside because flex tends to be difficult to work with and I've been known to accidentally drip a whole container of kalk outside the tank when using only flex tubing.



*The flexible airline tubing is run through the hole in the cap and connected to the rigid tubing. A short length of flexible tubing connects the two pieces of rigid tubing, and a small section of flex tubing is inserted into the end where the valve is placed.*

By now you're probably wondering about three things: 1) do you have to suck on the drip tube to start the siphon, 2) what does kalk taste like, and 3) what's with the second hole in the cap? Quick answers are: no, I've never tasted it, and it's the siphon starter. Cut another piece of flex tubing and insert it about 1/4" into the second hole. When blowing into the second tube it pressurizes the container and forces water into the siphon tube. This assumes, of course, that the airline valve is open. The DIY kalk dripper is now ready for use. Congratulations on a successful project!

(Continued on Page 6)



*The assembled kalk dripper. Note the siphon tube installed in the picture on the right.*

Now that the kalk dripper is assembled, next comes the not-so-daunting task of using it.

It's important when planning, and prior to building, the kalk dripper, to find a location in the aquarium where it can drip into turbulent water.

By placing the drip into turbulent water, better dispersion throughout the tank is achieved. Also make sure it's safely supported; a kalk container falling and spilling its entire contents can be a disastrous event! Plan the size of the container under the assumption that something will fail and the entire contents may possibly drain quickly into the tank. Some potential pitfalls could include such things as the airline valve falling off (unlikely), the container springing a leak (unlikely), or forgetting to turn down the drip rate after starting the siphon (likely). If the aquarium has a lot of evaporation, consider making two containers; one can be settling while the other is in operation and dripping kalk.

The general rule of thumb in mixing kalkwasser is one teaspoon of kalk powder per gallon of water. I am not qualified to get into the chemistry aspects, so don't ask me why. Fill the container about 1/3 with RO/DI water and add the kalk. Swirl it around until it's in suspension, and add the rest of the water and cap the container. Be careful while doing this part, as kalk can be an irritant if it gets on your skin. I usually mix up the kalk in the evening and set the container in place without starting a drip. The next morning it takes just a few seconds to start the siphon and set the drip rate. The proper drip rate depends on your setup and the water volume of your system. For my small tanks, about one drip per second is slow enough to not cause sudden pH fluctuations and still get the kalk in the tank; obviously, larger tanks can handle faster additions of kalk.

There is some minor maintenance involved in dripping kalk. First, you'll discover a sludge accumulating in the bottom of the container; simply pour it out. Eventually, the airline valve will start to clog with calcium deposits. You'll realize this when the drip rate becomes hard to regulate or stops completely. Either dripping plain RO/DI water through it every couple of weeks or removing the valve and soaking it in vinegar will easily solve this problem.



*Two kalk drippers, utilizing different size containers, in operation on the author's tanks.*

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***Credit goes to the owner of some long-forgotten website that had this kalk dripper posted. This is not an original design, and I don't know where it originally came from.***

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***Original posting and full color pics can be found at:  
<http://www.reefwebsites.com/agu/kalkdrip/>***

### **2003 - 2004 C-Sea Officers**

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## **MEMBERSHIP CORNER**

Hey C-SEA Members (or those who think they are!):

Please check the mailing label of your *Octopus* to see if your membership in C-SEA is current. If you wish to re-join, please mail a check for \$15.00 and your name, address, phone and e-mail to:

Stan Dannemiller  
C-SEA Membership  
441 Locklie Dr.  
Highland Hts., OH 44143

Thanks to the following members who updated their membership at the January Meeting:

Peter Chefalo  
Daniel Fu  
Dianne and David Kattman  
Tom Leiden  
Dave Pierce  
Joe Pontious  
Bill Sawyer

## **Promoted by C-SEA and CORA 6TH ALL OHIO FRAG SWAP**

*Date: February 21, 2004*

*Time: 1:00 - 4:00*

*Location: Salty Critter - South Shore Plaza, 4809 Liberty Ave,  
Vermillion, Ohio 44089*

Dan Lehky of the Salty Critter will be hosting this Swap from his new shop in Vermillion. So start frag'ing those corals now, dig out that old equipment and get ready to have a great time!

All are welcome. Check out the thread in ReefCentral Announcements for everyone to post questions and swap lists

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