

# Fish 'N' Chips

## A Monthly Marine Newsletter

### December 1999 Issue

**From Liz**

By Elizabeth M. Lukan 12/16/99

**New Email Address** - My new email address for all correspondence is [fishnchips@mail.com](mailto:fishnchips@mail.com). The subscribe (~~FishNChips-subscribe@egroups.com~~) and unsubscribe (~~FishNChips-unsubscribe@egroups.com~~) email addresses remain unchanged. visit <http://www.marinefiends.com/> (updated 10/05/05).

**Recall on Underwater Strobes** - Sea & Sea Underwater Photography (U.S.A.) Inc. is recalling approximately 7,000 underwater camera strobe lights. The battery cap needs to be replaced. The recall is for all model YS-50 strobes and model YS-60 and YS-120 with serial numbers starting with 96 or 94. You can find the serial numbers inside the plastic housing. The strobes came in yellow, black and orange and were sold from February 1988 to March 1999 for between \$500 and \$800. The strobe can become flooded and gas build-up can cause the battery cap to eject or the front section of the strobe may violently separate. Two injuries have already been reported - a chipped tooth and facial lacerations. Immediately stop using the strobe. Flooding may be the result if the strobe stops working or appears corroded - return it to an authorized repair center. Sea & Sea is offering a free replacement battery cap with a vent that prevents the gas build up within the strobe. To find the nearest authorized repair center or for more information, call Sea & Sea at (800) 732-7977 9 am to 5 pm PST Monday through Friday. Or write snail mail to: Sea & Sea Products Underwater Photography (U.S.A.) Inc., 1938 Kellogg Avenue, Carlsbad, CA 92008 or via email to [service@seaandsea.com](mailto:service@seaandsea.com).

**Win \$100** - ONElist, the service that lets me send out all these issues at no cost to me or you, is holding a Holiday Drawing. To find out more and to enter the ONElist Holiday Drawing go to <http://www.onelist.com/info/holidaydraw.html> (page gone, 10/02/05). When you enter, be sure to submit my name (Elizabeth M. Lukan) as the person who referred you to the drawing, as well as the name of this community (FishNChips). By giving my name, I could win a prize too! Good luck and enter before 12/30/99 because the drawing ends then.

**Fish 'N' Chips' Website** - You all know by now that Xoom has removed the Fish 'N' Chips Website from their servers. They say I violated their Terms Of Service. They will not tell me how. The day it happened was a very difficult one for me. I thought and feared

that Xoom's actions would make you think the worst of me, that I HAD actually violated their TOS. I didn't. As a web designer, I know how to design sites within the rules. As a hobbyist, doing this newsletter and keeping it free means the sites and references and friendships I've made are true, there is no money to cloud anything I put in Fish 'N' Chips. Nobody gets preferential treatment, the hobby itself is the only reason anybody is found in Fish 'N' Chips. And, when they are found in Fish 'N' Chips, they are ALWAYS given credit. But you know this already...

When I sent out those emails to let everyone know what was happening, I received so many responses back. Everybody was supportive of me and the work I do. All those emails are what made Xoom's actions take backstage. I've thanked everybody who wrote me and here I will thank you all again. Knowing that at least some of you do not doubt me, made that horrible day a memory. To quote one subscriber, "...forget them and keep sharing your passion..." Thanks Fabrice! I will!!

I have found a new home for Fish 'N' Chips. The technical requirements are different than Xoom's so I can't just upload the existing site to the new one. Between now and the January issue, I'll be working on the site. It should be back on the net sometime in January. Maybe I'll add some new goodies for you too!

***Happy Holidays!*** Danny, David, and I send each of you and your families our best wishes for a great holiday and wonderful New Year's. Enjoy yourselves!

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## A Song For The Holidays

By Gary Robinson, 12/22/98

Edited By Elizabeth M. Lukan, 12/2/99

The happy acroporas  
Are lighting their menorahs  
All the little tube-worms  
Are swaying in a chorus

Humming protein skimmers  
Blinking halide dimmers  
They all work to make the  
Water nice for swimmers

Christmas bells are ringing  
Water pumps are singing  
And coral tentacles  
Take a break from stinging

Cleaner shrimp are meeting  
Feelers wave in greeting  
And when food arrives the  
Triggerfish are eating

It's the festive season  
They all know the reason  
Thanks to XMas money  
The tank will be breezin'!

***Editor's Comments:***

Last December when Fish 'N' Chips was only two issues old, Gary posted the above on one of the newsgroups. I emailed him and got permission to publish it. And, so here it is, a whole year later. I hope you enjoy it. Thanks Gary. Oh, and editing was really just my re-typing it from a printout.

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## Critter Corner

### Tridacna crocea

By Elizabeth M. Lukan 12/16/99

***General Information:***

Tridacna crocea are the most colorful members of this **genus** with a variety of patterns with mixtures of blue, purple, yellow, green, brown, gold, and orange. The **mantle** usually has iridescent blue, yellow, or green blotches, spots or lines.

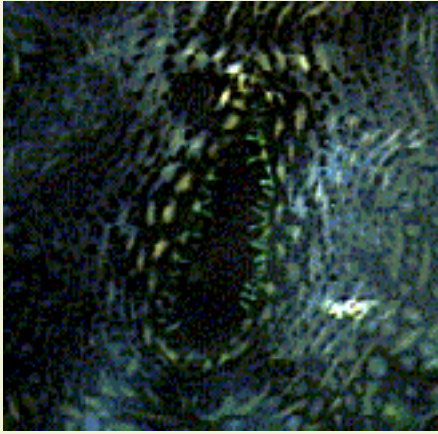
With a maximum length of 6 to 9 inches (15.2 to 22.9 cm), T. crocea is the smallest of the Tridacna clams.

Some characteristics of Tridacna crocea:

- large and wide **byssus gland** opening
- smooth shell with closely placed scutes
- scutes are on the upper portion of the shell only
- the inhalant **siphon** have very small and fine tentacles
- clams from aquaculture systems will have scutes along the entire shell since they haven't ground them down as a result of burrowing
- shells have a symmetrical shape



The picture to the above right clearly shows the scutes on the upper portion of the shell only. The lower scutes have been worn away by the clam's burrowing habits.



The image to the left clearly shows the tentacles on the inhalant siphon of the *T. crocea*.

*T. crocea*'s are often confused with *T. maxima*. The color patterns of these two clams is similar, the difference can be determined by the shells, which are much different. *T. maxima* usually have an elongated shell. Also, the scutes of *T. maxima* are more pronounced and cover most of the shell. The difference may also be determined by the byssus gland, which on *T. crocea* is very long and wide.

***Common Name(s):***

*Tridacna crocea* are commonly called Crocea, Boring, or Crocus Clams.

***In The Wild:***

*T. crocea*'s are usually found in the shallow areas near the shore or on the upper-most areas of the reef. This clam's distribution in the wild ranges from Thailand to New Caledonia.

*T. crocea* is known as the Boring Clam because with contraction and relaxation of their byssal muscles, they burrow into boulders and coral heads. Once burrowed, they use their byssal threads to hold themselves in place. Usually only the top edges of the shell and mantle are visible.



***Home Aquaria:***

Coming from shallow waters in the wild, these clams will need intense lighting. If you plan to keep these clams under fluorescent lighting, keep them close to the top of the tank, and the lights. If the clam is predominately brown and showing little of its normal coloration and patterning, it should be placed lower in your tank away from strong lighting.

The brown coloration is the clam's **zooxanthellae** showing and is probably due to the clam

losing its protective coloration during its long trip.

*T. crocea* can handle strong water motion and relatively strong fluctuations in water parameters. Remember, you *really* don't want your water parameters to fluctuate too much!

Because these clams burrow into rock and rely heavily on their byssal threads for attachment, collecting them is more difficult and the chances of receiving a damaged clam are greater. Once the byssus gland is damaged, the clam doesn't usually live long. Most likely this is due to bacterial infections and not the damage itself. You will have a much better chance of keeping a wild collected clam if you receive it still attached to a rock.

If a healthy clam is obtained and proper light provided, these clams are relatively easy to keep. They are sensitive to being handled so avoid it if at all possible - remember what I said above about these clams relying on their byssal threads and the damage that could be done when messing around with an attached clam. Keep a watch for predators as this clam can be easy prey with its large and wide byssus gland opening.

Clams obtained from aquaculture systems are available and are very hardy in tanks.

### ***Current Happenings:***

While researching this article and searching the web for images, I began corresponding with Gary Meadows of Harbor Aquatics (<http://www.harboraquatics.com> (*url dead, 10/02/05*)). In an email from Gary dated 12/3/99, we discussed some current clam issues. Here's what we talked about in a nutshell. Most of below is a direct quote from Gary's email.

*T. crocea* will be in short supply this winter due to the present situation in the Solomon Islands. The brood stock or the whole operation will hopefully be moved to a more stable area. Chances are the shady side of the industry will be finding illegal, wild caught clams to take advantage of the situation. The quality of these clams will be questionable at best. Hobbyists need to make sure they know the source of their livestock. Their pet stores and suppliers need to know they care.

Because of the slow growth of *crocea* and the present rules, it will take up to eight years to get a *crocea* farm into production from scratch. If they save the brood stock from the Solomons, it will still be three years before they are readily available again. As the rules (CITES) are now you have to spawn clams, raise the spat (F1) to breeding size (5 years minimum), spawn the F1 clams, and then raise the baby clams (F2) to marketable size (2-3 years). To quote Gary, "It's a wonder we have any at all."

Meanwhile tons of wild stock are harvested for food. We don't have a farm to repopulate the wild stock because of CITES rules to protect the resource. But, the rules apply to live

clams not dead ones.

Our correspondence ended with Gary suggesting I switch my article to *T. maximas* as they will be in plentiful supply out of the Wau Milli farm and others. Gary is expecting to see some really nice *maximas* this winter. I explained to Gary that I was doing all the clams as part of a series. I'm glad to get this current information concerning the *T. crocea* out to you before you start seeing illegal wild clams at your stores. If you want a *T. crocea* for your collection, wait till the farms get set up. If you can't wait that long, make sure your source is reliable and don't be surprised if the price is a lot higher than what you see now. As for *T. maximas*, I'm thinking of doing them next, since they will be plentiful, the information on them should be just in time.

**Cost:**

**Store:** My local store didn't have clams in stock due to their redesigning their marine system. So, I couldn't get local prices. Sorry folks.

**Online:** Online prices are based on the clam's size and are usually broken down into two categories (Ultra and First Grade). Here's a list of what I found:

*US Dollars:* Prices below are from three different web sites.

Size	Ultra Price	First Grade Price
1 to 2 inches	\$25.00 to \$30.00	\$15.00 to \$20.00
2 to 3 inches	\$40.00 to \$45.00	\$25.00 to \$28.00
3 to 4 inches	\$60.00 to \$65.00	\$35.00 to \$40.00
4 to 5 inches	\$70.00 to \$75.00	\$50.00

*Canadian Dollars:* I only found one Canadian site selling clams, follow are their prices.

Size	Ultra Price	First Grade Price
1 to 2 inches	\$66.00	\$44.00
2 to 3 inches	\$77.00	\$69.00
3 to 4 inches	\$115.00	

**Photo Credits:**

The single *T. crocea* image with the purple colored mantle and lack of lower scutes showing was obtained from the Exotic Tropicals (<http://www.exotictropicals.com>)

website. Permission for it's use was granted by Dave Brough.

The second image shows the tentacles on *T. crocea*'s inhalant siphon. The third image shows a large variety of small *T. crocea*'s and the huge selection of colors they can be found in. The second and third images were obtained from the Harbor Aquatics (<http://www.harboraquatics.com> (*url dead, 10/02/05*)) website. Permission for their use was granted by Gary Meadows. Gary also allowed me to crop the inhalant siphon out of a larger clam image to show you the tentacles. Permission to do that is greatly appreciated.

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## E.T.S.S. model 800 StingRay Skimmer

By David Weinstein, [David@fishwish.com](mailto:David@fishwish.com) (no longer a valid address - 4/29/01)

Edited By Elizabeth M. Lukan, 12/7/99



This review of the E.T.S.S. model 800 StingRay will be done so with certain criteria which I feel is important to both the hobbyist and the professional alike. These criteria are Quality of construction, Ease of maintenance, Design concept and Overall performance. Of all of the downdraft style skimmers tested thus far, The E.T.S.S skimmer was well ahead in its category.

**Quality of Construction:** This unit which is of a modular design is made primarily of 3/8" cast acrylic in black and clear. The one feature which most distinguishes it from any others in this class is perhaps the method of construction and assembly which A.E. Technologies utilizes to build this skimmer. It has been typical in this industry for manufacturers of acrylic equipment to use a standardized method of acrylic joinery which relies on the sole use of acrylic solvents to join their different pieces together and construct their seams. Although A.E. does in fact use an acrylic solvent to join their different parts they take the construction process a step further by providing a truly machined surface to be joined. All parts and components to be glued together are first machined on metal working lathes to exacting tolerances to insure seam and component seal integrity prior to being assembled using an acrylic solvent. This insures the end user that the product they are buying will most certainly give them years of leak free uninterrupted service. These guys have brought the term **flat joinery** to a new level in the aquarium equipment industry. All seams are not only expertly machined but after they are bonded together they are then further sanded and a well rounded finish is applied to all edges and seams producing a very aesthetically pleasing piece of equipment. All sections of this unit are modular and flanged by design. All of the flanges are key holed, a very nice feature now making an appearance in the majority of the better quality skimmers which is clearly a category this unit fits into.

**Concept of Construction:** It wasn't to many years ago that the concept of the down draft skimmer was unheard of, then came along the E.T.S. skimmer. To say that it rocked the skimmer world in general would perhaps be an understatement. Claims of a more efficient level of skimming were resounding at an exponential level. It appeared the superior replacement of the then king of skimmers "The Venturi Skimmer", it also remained to be seen. The heart of this design is perhaps its injection valve method of introducing a high pressure of water blasted into an injection tower prior to its arrival at the reaction chamber. This design does indeed produce a very efficient competent level of foam fractionation. Having successfully done away with the venturi valve in this design allows the user to be free of venturi valve clogging problems as well as allowing for different levels of water pumps to be utilized at a greater level of energy savings. This design **IMO** is in fact a different way to perhaps skim (pun intended) the same cat.

The single largest design feature of this particular unit was its upgrade ability. The entire unit consisting of the injection tower as well as the reaction chambers is completely removable and interchangeable with larger sections which could be purchased in the future should the users needs as far as tank size and/or bio-load change. What this allows the user to do is to purchase a skimmer for their present needs and build upon it in the future, rather than be made to purchase a whole new skimmer in the future.

**Ease of Maintenance:** I found the modular design of this skimmer to make it quite easy to clean. All of its sections were flanged and Key holed which allowed for easy removal of the reaction chambers for cleaning. I would suggest a large 5 gallon bucket for effluent collection during the break in period as the skimmer works most erratically during this period of time. After which I found a 1 gallon effluent collection container to be adequate. This unit was very obviously designed with an ease of maintenance in mind. The one addition I would recommend is the installation of a quick disconnect fitting on the drain hose. This addition would allow an even faster removal and cleaning of the unit, allowing the user to be free of such encumbrances as a long drain hose to deal with, but this was no big deal really. I sincerely believe that a unit couldn't be much easier to maintain.

**Ease of Installation:** I found this unit to be quite easy to assemble and get up and running in a short period of time. The very well written instruction manual that came with the unit made everything quite clear as far as installation and operation were concerned. I'll have to remember to read them sometime :-), hey like I said I gotta be me!. The unit assembled within a matter of minutes and I found all of the necessary fittings and hoses were supplied with it, with the exclusion of some of the output PVC hose which I would not consider to be standard issue by any means as every installation is a little different.

**Skimmer Performance:** This skimmer performed quite well from the time it was started to the time the testing of it concluded some three weeks later. The skimmer operated most erratically during the break in period, after which it settled into a very nice groove. In a

matter of hours I was unable to see clear through the upper collection chamber as it was completely covered with brown gunk (technical term). Perhaps the most noticeable feature of this skimmer after its initial break in period of about a week was the complete and total lack of any fine bubbles being returned to the main tank, this being without the aid of any bubble trap what-so-ever! I was impressed. The tank maintained a level of clarity after the skimmers initial break in, unsurpassed by any as of yet. During the first week of operation the skimmer produced 9½ gallons of the most disgusting vile effluent known to man, after which a gallon of dark vile filth was collected weekly. During the first few weeks of operation the skimmer required many break downs to clean the collective mass off of the surfaces of the reaction chambers, daily to be sure. After this period of time a weekly break down and cleaning were all that was required. The level of carbon based compounds that this unit produced as well as some amino acids and organic compounds was significantly improved during the second and third weeks of operation. During its break in period the effluent collected was a very much watered down version of the same. Bring your gas mask and surgical mask when you go to clean this baby, as to be sure you'll be needing them.

**Problems:** There's really not much to report about here with the exception of some annoying salt creep that continued to form at the seam edges. I was never really sure of why this was but never saw any evidence of a leak in any fashion, this salt creep at the seams did have me raising an eyebrow or two periodically. Beyond the first week of operation I found this unit to be truly set and forget in terms of an efficiently operating trouble free unit.

**Technical Assistance:** I found John from A.E. Technology to be helpful and more than willing to accommodate my questions throughout the entire test period. Like the greater majority of the better companies involved in the industry, A.E. also has its eye on the pulse of customer service, and I have little doubt that they would work towards any problem resolution the might possibly arise. They are a credit to the industry as a whole.

The following is a partial list of the effluent contents, all quantities are in PPT except where otherwise indicated.

- Nitrate: 37
- Potassium: 1.8
- Sodium: 3.9
- Iron: .21
- Bi-carbonate: 19
- Magnesium: 1.1
- Calcium Carbonate: 3.2
- Amino Acids: 31% (several varieties)
- Organic Compounds: 51% (several unidentified varieties)
- Living Phytoplankton: 4%

- Dead Phytoplankton: 18%

**Summary of Product Review:** The E.T.S.S. model 800 performed well under all conditions. Its recovery after feedings and tank maintenance was quick and reliable. This was the only skimmer tested in any class that continued to perform well while returning no fine bubbles to the main tank in any way. Overall I'd say a purchase of this product would be an asset to any reef keeping hobbyist, and one where a person could be assured of a fine level of customer service and company backing.

David is a professional reviewer who's prices are based on the product being reviewed. Anyone interested in getting a review done, should contact him via email to [David@fishwish.com](mailto:David@fishwish.com) (**no longer a valid address - 4/29/01**).

***Editor's Comments:***

David does this for a living, so what I had to edit was very limited. I corrected a few spelling and grammar errors and that's about it. The bulk of my editing was really just taking David's document and putting it into html.

A.E. Technology, Inc., ETS manufacturer, can be found at <http://www.aquarium.net/aetech/> (**address updated 4/19/00: no longer a valid address, new address unknown**). I found the E.T.S.S. model 800 StingRay skimmer for sale on three online websites ranging in prices from \$551.00 to \$589.00 (US) and \$829.00 (Canadian).

***Photo Credits:***

The image of the ETS skimmer was obtained from the Premium Aquatics (<http://www.premiumaquatics.com>) website. Permission for it's use was granted by Jason.

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## **What's Up @ ReefsUK**

- <http://www.reefsuk.org> -

By Elizabeth M. Lukan 12/3/99

**11/16/99** - Coming soon to ReefsUK, The ReefsUK Captive Raised Livestock Database, a list of ReefsUK members who have propagated corals and/or spawned/bred/raised marine fish or inverts. ReefsUK has hopes that this database will grow into a nationwide network of hobbyists who can exchange livestock and ideas and also provide encouragement to other hobbyists to give propagation a try, or attempt spawning a particular species of fish. No personal details other than your name and a general location will be displayed on the website. Any inquiries regarding your entry on the database will be directed to ReefsUK who will act as an initial intermediary. Please send an email to ReefsUK with your name, location, species, general info (e.g spawned only), cost of livestock (e.g. swap or cost) and

any other information you feel is relevant.

**12/2/99** - The ReefsUK Captive Raised Livestock Database is now on the website. Please check it out. And, send an email to get yourself listed if you've propagated/spawned/bred/raised any marine creature. They are working on adding a form to the site which will eliminate the need to submit your information via email, but that doesn't mean you should wait around for the form!

**12/2/99** - A report and photographs of the ReefsUK Display Tank at Scarborough Sea Life Centre will be coming soon. You'll remember that this is the tank that contains only captive bred/propagated livestock donated by members of ReefsUK. This tank is currently 2 months old.

To join the ReefsUK Mailing List, send an email to [post@reefsuk.org](mailto:post@reefsuk.org).

### *Editor's Comments:*

Information in this section covers the latest happenings at Mark T. Taber's ReefsUK Web Site. Mark has given me permission to publish any information from his mailing list that I feel would be of interest to Fish 'N' Chips subscribers. So, the above, although reworded by me, should be credited to Mark or to Derek Scales who works closely with Mark on the running of ReefsUK. The dates in bold coincide with Mark or Derek's mailings and are provided as a reference.

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## **\*Special\* Caught In The Net \*Special\***



Monolith Marine Monsters' (m3) New Products Announcement Part #2  
Edited By Elizabeth M. Lukan 12/3/99

9. **Cooling Fan System:** Available in 2, 4 or 6-fan set to cool down your reef system up to 10 degrees F. Link: <http://www.marine-monsters.com/front/products/ma-fan.html> (*url dead 10/03/05*)
10. **Aquascaping & Maintenance Tools:** For aquascaping and algae scraping. We have imported several brand new squeegee tools from Germany. Link: <http://www.marine-monsters.com/front/products/fp-tools.html> (*url dead 10/03/05*)
11. **Substrate Cable Heater (w/ Thermostat):** For Jaubert Plenum style or single layer substrates. Creates dynamic convection to eliminate hydrogen sulfide build-up. Link: <http://www.marine-monsters.com/front/products/ma-subheater.html> (*url dead 10/03/05*)

12. **Multi-outlet Irrigator:** For creating in-tank Algae Scrubber, waterfalls, blowing off detritus, targeting currents, feeding, oxygenation, etc. Link: <http://www.marine-monsters.com/front/products/ma-irrigator.html> (*url dead 10/03/05*)
13. **AquaSense:** World's first infrared 'no-contact' water sensor / float switch. Link: <http://www.marine-monsters.com/front/products/ma-aquasense.html> (*url dead 10/03/05*)
14. **Life & S-Plus:** Liquid amino acid nourishment for corals & trace elements supplements for reef aquariums respectively. Link: <http://www.marine-monsters.com/front/products/misc.html> (*url dead 10/03/05*)
15. **sr-PSB & SuperBio:** Active Super Red Photosynthetic Bacteria to purify water while nourishing invertebrates & decomposing organic wastes respectively. Link: <http://www.marine-monsters.com/front/products/srpsb.html> (*url dead 10/03/05*)

Plus many more on the Monolith Marine Monsters site:

Main Page: <http://www.marine-monsters.com> (*url dead 10/03/05*)

Marine Equipment Menu Page: <http://www.marine-monsters.com/marine.html> (*url dead 10/03/05*)

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## Caught In The Net

By Elizabeth M. Lukan 12/16/99

[This Month's Selection From The Fish 'N' Chips Site List](#)

### Informational & Educational Sites

#### Event Listing (Meetings, Conferences, Etc.)

- [About Saltwater Aquariums](http://saltaquarium.about.com) - <http://saltaquarium.about.com> (11/1/99)  
*"Our Site has been in existence since 1997, formerly known as Miningco.com. It is a FREE informational and NetLinks saltwater aquariums site for marine aquarists of ALL Levels."*
- [fishroom.com](http://www.fishroom.com) - <http://www.fishroom.com> (7/29/99) (*url dead 10/03/05*)  
*"We are a community. Always looking for people to help."*

**Site Submission and Updating:** Currently on hold till the new Fish 'N' Chips Website debuts.

## Chips...er...Tips

### Ways to tell a good local fish store!

By Elizabeth M. Lukan 12/16/99

This topic could be a full size article all on it's on, it almost is. But, here's some quick notes on the subject. I've put these together from numerous sources, including personal experience, working with my local fish store, and surfing all over the net researching my issues. Anybody want to add an item I've forgotten, or want to expand on what I've got, or even counterpoint one, just drop me an email.

- Try to visit your local fish store (LFS) in midmorning on a weekday. Most stores open around 10am and are busy getting everything fed and checking on tanks and just setting up for a day's business and most of their customers show up in the afternoon or evening. So, if you show up in the midmorning, you should have room to roam the store and staff available to spend time with you.
- The above said, look in all the tanks. Even the freshwater ones. See how they are maintained.
- Don't be surprised to see a dead fish or two, especially in a large store. If it happens at your house, it's gonna happen at the store. Don't let that be your judgement on the store. Obviously, a large number of dead fish in a good number of tanks is another story. There shouldn't be any dead saltwater fish.
- Look for sick fish. There should be very few of them. A large LFS will most likely have a quarantine system and will remove any fish that isn't looking well. A smaller LFS may move an unwell fish to a tank off it's system or a battered fish to a safer tank and hope for the best.
- The tanks should be relatively free of algae.
- The tanks should have clear postings of what's in the tanks and how much they cost.
- The marine tanks should be free of aiptasia - well, you can hope anyway!
- Check the marine tanks for hard to keep corals and fish. A LFS that stocks a tank full of Mandarin Fish doesn't care who they sell to or how long the fish stay alive.
- Check out what else the store sells: dry goods, frozen and live foods, other livestock.
- Ask about water parameters. When did they test the water last? How often do they test? What were the results? Remember, systems vary a great deal and a large setup can handle different levels than what you've got a home. And, LFS have to feed often to accommodate their stock, tanks that are fed a lot, will not have perfect water parameters. Also remember, that if the water parameters vary greatly from what you have at home, greater care and time needs to be taken in acclimating any animal you purchase from the store.
- Ask the salesperson some questions you already know the answer to. This will give

you a good idea of the staff's expertise level. Ask if there is one particular saltwater expert on staff.

- When you see a fish you want, ask to see it eat. I've said this before and I'm just going to keep saying it until everybody does it.
- When you see a fish or coral you want, ask the salesperson when it was received. You really don't want to buy an animal that was just unpacked that morning. Force yourself to wait at least one day. I'd personally wait more, like three days. If you have a relationship with your LFS, they will hold something for you, not forever, but they will. But, you've got to actually buy the animal after they hold it for you. Don't leave your LFS hanging or you'll never get another favor from them again.
- Watch your fish get caught and bagged. More than a few minutes of chasing and the animal will be stressed. You don't have to take that fish. Tell them you'll be back tomorrow for them to try again. I've never dealt with a store that wouldn't hold a fish for a day. I'm sure they are out there, but if they are, then they don't pass this test and don't deserve your business anyway.
- If you want to try something or already use something the LFS doesn't have, ask them for it. The LFS may stock it for you - mine did. I bought a Yellow Tang about a year ago and wanted to try Ocean Nutrition's Seaweed Selects, but my LFS didn't carry them. I asked the salesperson and you know what, they stocked it. Just because I asked. And later, when I asked about the brown kind, they got it, just so my fish could give it a try (the fish loved it, by the way).
- Know the store's warranty policies regarding livestock. Not all store's have one so don't expect it. If a warranty isn't posted, ask.

**To Submit Your Tip:** Send your tip via email to [fishnchips@mail.com](mailto:fishnchips@mail.com) with a subject of *Tip Submission* (information updated 4/26/00: coding replaces need for subject notation) and I'll publish it in an upcoming issue of Fish 'N' Chips. I'll write it up for you or you can do it yourself if you are so inclined. Make sure you let me know if I can include your name and email address or if you'd rather go anonymous.

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## Upcoming Events

By Elizabeth M. Lukan 12/3/99

December 1999

**Date and Time:** from now until 1/1/2000 on Fishroom.com

**Info:** "Y not 20k?" Contest Sponsored by Reefers (<http://www.acropora.com>). Tell us why you want to upgrade to Metal Halides. Reply to a post in The Cove to enter. Winner gets \$75 off any MH system from Reefers. Winner to be announced Jan. 1, 2000.

**Access:** See the Message Board "The Cove" at Fishroom.com (<http://www.fishroom.com>)

(*url dead 10/03/05*) for the message with the "Y not 20k???" subject and post your reply to enter.

**To Submit Your Event:** Send your event and all the specifics (date, time, location, pricing, contact info, etc.) via email to [fishnchips@mail.com](mailto:fishnchips@mail.com) with a subject of *Event Submission* (information updated 4/26/00: coding replaces need for subject notation) and I'll publish it in all issues of Fish 'N' Chips prior to the event.

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## What the ... ?

By Elizabeth M. Lukan 12/3/99

### **Byssus Gland**

The structure in clams that produces fibrous threads (byssus) that attach the clam to substrate.

### **Genera / Genus**

Genera is the plural of genus. In the taxonomy classification, the genus is the category ranking below a family and above a species. Simply said, it's a class, group, or kind with common attributes.

### **Mantle**

Large, pigmented fleshy portion of tridacnid clams that is exposed to the light by gaping of the shell valves. Also called siphonal tissue. Also, the coral tissue in fleshy polyps (e.g. *Catalaphyllia*).

### **Siphon**

The inhalant and exhalant siphons of tridacnid clams are used to allow for gas exchange and to expel wastes.

### **Zooxanthellae**

These are the tiny plants called dinoflagellates (single-celled microscopic organisms which belong to the Protista kingdom) that live symbiotically with corals, tridacnid clams, and some sponges. They provide food for the host and in return get the nitrogen, phosphorous, and carbon dioxide they need for growth. The scientific name is *Symbiodinium* spp.

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## Prove It!, a Bibliography

By Elizabeth M. Lukan 12/16/99

#reefs (<http://www.reefs.org>), LFS Myths Debunked 11/22/98 by Nathan Freedenberg

The American Heritage Dictionary, Third Edition, Copyright 1994 by Houghton Mifflin Company

Aquarium Frontiers (<http://www.aquariumfrontiers.com>), October 1997, On The Half Shell By Daniel Knop

The U.S. Consumer Product Safety Commission (CPSC) Subscription List (<http://www.cpsc.gov>)

CoralFarms, <http://www.coralfarms.com>

Exotic Tropicals, <http://www.exotictropicals.com>

Harbor Aquatics, <http://www.harboraquatics.com> (*url dead, 10/02/05*)

J&L Aquatics, <http://www.jlaquatics.com>

Jeff's Exotic fish, <http://www.exoticfish.com>

Premium Aquatics, <http://www.premiuaquatics.com>

The Reef Aquarium Volume One by J. Charles Delbeek and Julian Sprung, First Printing July 1994, Published by Ricordea Publishing

The Wave - Eastern PA Reef Club Newsletter Volume #1, Issue #9, July 1998, Tridacna Clams By Todd Kunkel, found on the Eastern PA Reef Club Website, <http://www.eparc.com> (*url dead 10/03/05*)

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