

September 25, 2007



# tideline aquatics Newsletter

## Tideline Aquatics Store Hours

Monday – Friday 11am-7pm  
Saturday 10am-6pm  
Sundays 1pm-5pm

## CHOOSING THE BEST MARINE SNAILS FOR YOUR REEF AQUARIUM

In the reef aquarium, snails can be a blessing when it comes to keeping the sand bed and live rock free from problem algae. But when you purchase reef snails, you will want to consider what types of algae different snails prefer. While one variety of snail may eat primarily filamented (hair) algae, another species may only eat film-like (diatom) algae. There are other snails that feed primarily on detritus in the sand or mud of a refugium. Choosing the correct snail (and the right number of snails) will prevent you from purchasing a variety that may starve in your aquarium. Here are some of the more common reef snails offered in our hobby and their primary food sources and hardiness in the reef aquarium.

### **Mexican Turbo Snail (*Turbo fluctuosa*)**



This is a very popular reef snail but it requires a large amount of filamented hair algae to survive. Mexican turbo snails also grow large and are not suited for small reef aquariums. If all of the hair algae in the aquarium is consumed, supplemental algae must be given to prevent starvation. Dried marine algae attached on live rock makes a good supplement. As these snails grow, they can

become tank wreckers knocking over coral specimens that are not attached as it makes its way into tight areas to seek out food. We suggest purchasing these snails as small as possible to prevent them from being so destructive. Mounting your live corals on the rockwork using a fish-safe epoxy is also recommended. Also, Mexican turbo snails will not tolerate water temperatures above 80 degrees!!!

### **Atlantic Turbin Snails (*Astrea tecta*)**



This snail is collected from the Caribbean and is one of the less expensive yet hardier of the reef snails. We find them to be excellent diatom (brown) algae eaters that will also graze on short filamented algae. This snail will not eat thick long hair algae. Most literature states that this snail will eat cyano-bacterial algae yet we have seen little evidence of this with feedback from customers. This snail will even clean the aquarium glass. Atlantic turbin snails seldom grow large enough to be tank wreckers as with the Mexican Turbo making them a good choice for even smaller reef tanks. If their food source becomes exhausted, try supplemental feedings of spirulina tablets to prevent starvation. Atlantic turbo snails are also more tolerant of warmer temperatures compared with many other reef snails (up to 84 degrees).

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### **Cerith Snails (*Cerithium* sp.)**



Cerith snails really are one of the best snails for the reef aquarium, even nano reefs. These snails remain small (1") and eat diatom (brown) algae, cyano (red) algae and even detritus from the substrate (sand or refugium mud). This snail is mainly active at night often finding refuge in the live rock or sand bed during daylight hours. These snails are extremely hardy and will often multiply in the aquarium if a continuous food supply is available. Hermit crabs love stealing the shells from this snail so offer your hermits plenty of spare shells to reduce the risk of this occurring. Cerith snails will also deal with warmer aquariums. These snails will not eat hair algae. Supplemental feeding with algae-based food tablets may be required if their food source is used up in the aquarium. The cerith snail may not be as showy as other snails but it is one of the best suited snails for the reef aquarium.

### **Pyramid or Trochus Snail (*Trochus* sp.)**



Trochus snails are quite hardy in the aquarium if provided with excellent water quality. These snails will eat diatom algae, shorter filamented hair algae and even cyanobacteria (red) algae. We suggest keeping this snail in reef aquariums that do not exceed 82 degrees for best longevity. Reaching about 2" at full size, these snails can tip over corals if they are not attached. This snail will eat algae from both the live rock and the glass surface of the aquarium but they can eat themselves into starvation if inadequate algae are not present to sustain them. Dried marine algae and/or tablet type algae food may be required. This snail commonly spawns in the aquarium giving your reef organisms an excellent food source! This snail is best suited for reef aquariums larger than 30 gallons due to their eventual size.

### **Nerite Snails (*Nerita* sp.)**



Choosing the correct species of Nerite snail for your reef can be a challenge. Many species require tidal waters to survive meaning they will climb above the water surface waiting on the tide to come in to submerge them. Of course, this means their death in most aquarium situations. We have been acquiring a beautiful variety of Nerite that appears to remain below the water surface. This snail is only about 1/2" in size and seems to prefer diatom algae though literature we have read says some varieties will eat cyano algae (though we have not seen this). The variety we have been receiving seems to remain on the rockwork and sand bed munching on brown algae and presumably, detritus. If you see a dealer with a nerite snail species for sale, look at the holding tank closely. If the snails are right at the surface of the water or above the surface, avoid that variety of snail as it likely is a tidal species. This is an excellent snail for even nano reefs due to the diminutive size. These snails also have a beautiful pattern on their delicate shells. There are even freshwater nerite snails that are safe for planted aquariums! Nerites also work well in refugia where they will clean problem algae from the surface of macro-algae cultures.

### **Margarita Snails (*Margarites* sp.)**



**PINK MARGARITA (?)    BLACK MARGARITA (TEMPERATE)**  
Well I will have to say that after much research, I will have to rethink as to whether we should even stock this snail. Let me explain. When we found out that the black margarita snail was collected in temperate water (cold water), we stopped stocking them as they only survived a short period in warmer tropical reef aquariums. Our distributor claimed that the Pink Coralline Encrusted Margarita Snails were collected from tropical waters yet I cannot find **ANY** information to support this. I am going to contact

several of our suppliers on Wednesday and find out exactly where these pink margarita snails are being collected before we suggest you purchase any more of them. If they turn out to also be temperate water snails, we will no longer sell them. So for now, the jury is still out. If these are temperate water snails like the black turbos, we at Tideline owe you an apology for not further investigating these snails as we do not want to stock any live animal that has no chance for survival in the aquarium. Though these pink margarita snails seem to love to consume many types of algae (though not hair algae), if they are short-lived in the aquarium, it is unethical for us to continue to stock them. We will let you know!

### **Nassarius Snails (Nassarius sp.)**



Though the Nassarius snails are not algae eaters, they are excellent sand aerators and scavengers for the reef aquarium and refugium. These fast-moving detritivores remain buried in the sand or mud bed of the aquarium or refugium until they smell something to eat. As they erupt from the substrate, they quickly move in to consume uneaten foods, dead organisms and detritus. These snails are long-lived in the aquarium and are highly recommended for any reef aquarium that utilizes sand or mud for a substrate. A well-aerated substrate also reduces the growth of problem algae like cyanobacteria (red slime).

Regardless of the marine snail you choose, there are other considerations once you get them home. Though hardy animals, marine snails are extremely sensitive to changes in salinity, pH, etc. Slow acclimation (up to 2 hours) will ensure that your snails adjust to their new environment. Because snails grow with their shells, proper calcium levels of 350-400ppm are required for them to survive long-term. Snails are also extremely sensitive to organics. Nitrate levels should never exceed 20ppm. Reef aquarium nitrate levels should be maintained below 10ppm so this should not be a problem if you are keeping up with your regular partial water changes. Phosphate levels should be kept below .05ppm as well. Also remember that these snails come from

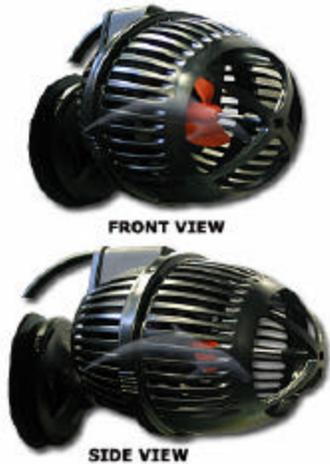
water that has ever-changing currents. In the wild, if a snail drops from a rock upside down, the currents assist in righting the snail. In the aquarium, this is not afforded to the snail. A snail that falls from the aquarium wall or rockwork that is left upside down will die if not corrected by you. Dead snails will foul aquarium water, therefore causing problems with other snails. Always ensure that your snail population is well cared for to ensure they will live for years in your aquarium.

## **CONFESSIONS OF AN AQUARIUM STORE OWNER**

Last week I wrote about how you should monitor your aquarium water temperature this time of year especially. With windows open in the cooler outdoors, your aquarium could become chilled, causing your fish to break out with parasite diseases. WELL, I woke up to find my own home reef aquarium at a temperature of 72 degrees with my heater frantically working hard to try to compensate for the drastic difference between the room temperature and the aquarium temperature, which it could not do. Needless to say, my reef fish have now broken out with a parasite infection! I have added no new fish for months yet the fish in my reef are suffering badly with this outbreak. Being a reef aquarium, it will just be a "wait and see" situation as far as the fish recovery goes. Effective parasite treatments are not safe for reef aquariums. Most of the reef-safe parasite treatments on the market seldom seem to work well enough to save the fish from the parasites. So instead, I have increased my feeding regimen, added food enhancers and beefed up their daily diet in hopes of keeping the fish's immune systems strong enough to endure the life cycle of the evil parasite outbreak. Wish me luck folks and watch your aquarium temperature to prevent the same from happening to your aquarium fish. Confession complete.....

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**HYDOR KORALIA**  
**CIRCULATION PUMPS**  
**ARRIVING ON THURSDAY!!!**



After being delayed by Hydor for over a month, the new circulation pumps are scheduled to arrive on Thursday. These pumps are for adding water flow within the aquarium. They attach to the wall of the aquarium using a magnet instead of the usual suction cups that tend to fail after several months underwater. In reef aquariums, these pumps will be excellent in fixing dead-zones where the water flow is poor. In fish-only freshwater and saltwater aquariums, these compact pumps can be added to increase water flow in the aquarium. The magnetic holder will handle up to 1/2" thick glass. Here are the specs on these new pumps:

<b>Model 1</b>	400gph	3.5watts	2 1/4" x 5"
<b>Model 2</b>	600gph	9watts	2 7/8" x 5 7/8"
<b>Model 3</b>	850gph	10watts	2 7/8" x 5 7/8"
<b>Model 4</b>	1200gph	12 watts	3 1/4" x 6 1/4"
<b>Nano</b>	240gph	3.5watts	2" x 3"

There is a 25% off introductory coupon available on our website for these new circulation pumps!! This coupon will be available for this week only folks so do not miss out!!

**WHAT MAKES A GLO-FISH™**  
**ACTUALLY GLOW?**

As you already know, Tideline Aquatics will not carry any dyed or tattooed fish. It is a cruel process that harms the fish from beginning to end. We will have to admit that we had to think twice before carrying Glo-fish but after some investigating, we found that no harm is done to the fish. First, the producers of the Glo-fish

started with the fertilized eggs of a regular zebra danio.



Standard Zebra Danio

Isolated genes from either a sea anemone or jellyfish were then microinjected into the eggs of the zebra danio (eggs that are already laid by the fish). These foreign genes become part of the genetic make-up of the injected eggs. The eggs then hatch and the zebra fry develop the neon colors you see in the Glo-fish – the same glowing colors you find in many sea anemones and jellyfish species. When Glo-fish are spawned, they actually produce the same brightly colored fry!! The Glo-fish on the market today are produced from the breeding of adult Glo-fish.



Currently these fish are available in three colors: Starfire Red, Sunburst Orange and Electric Green. The Electric Green have been unavailable recently but will be back in stock at our distributor soon. That said, no harm is done in producing this transgenic fish! They are merely zebra danios with a now, "natural" fluorescent color. Under actinic lights, these fish actually do glow.

**ACCEPTING APPLICATIONS:**  
**AQUATIC PROS AQUARIUM MAINTENANCE CO.**

Aquatic Pros is looking for HONEST, DEDICATED, HARD WORKING persons for possible employment with their company. You do not necessarily need to know all the odds and ins of the marine aquarium but experience with marine systems is a BIG PLUS. Their business entails the regular maintenance of freshwater aquariums, marine aquariums, reef aquariums and even garden ponds in homes and businesses throughout the Lowcountry. You must have a

vehicle (small truck, minivan, etc) capable of transporting water and other maintenance supplies to each job site you would be assigned to after an extensive training period. You must also have EXCELLENT people skills (you are not a jerk to your fellow American). Aquatic Pros offers good pay if you are chosen to work for this company. This job is not a “cake walk”, you must be hard working, able to lift heavy materials and flexible in your hours. If this sounds like you or someone you know, please call **Jason Sack at (843) 813-5006** for a possible interview. We recommend them to anyone that desires to have their aquariums and ponds serviced – because they are an honest business operation with strong work ethics and excellent people skills.

### **LOCAL CLUBS / ORGANIZATIONS/FORUMS**

Have a reef aquarium? Check out our local reef club at: [www.charlestonreefers.org](http://www.charlestonreefers.org)

Love water gardens and koi? Visit the Charleston Showa Koi Club website at: [www.charlestonshowakoiclub.org](http://www.charlestonshowakoiclub.org)

Saltwater fish aquarium club – CMAC [www.columbiamac.org](http://www.columbiamac.org)

Question and Answer Forum – [www.wetwebmedia.com](http://www.wetwebmedia.com)

### **Fish of the Week**



**KORAN ANGEL – POMACANTHUS SEMICIRCULATUS**

If you are a beginner and want to try a marine angelfish, with the proper filtration components and water quality, the Koran Angelfish makes an excellent candidate. This is not the angelfish for a small aquarium. We suggest having at least a 55 gallon tank to house one of these beautiful

marine angelfish. Koran angelfish reach about 12” at full size though they are slow growing as with most marine angelfish. Pictured above is a juvenile colored Koran. As it matures the color pattern changes (1-2 years) to the adult phase pictured below. As with all marine angelfish, good water quality and a mixed diet including drilled marine algae is a must. We suggest using one of the complete marine fish diets (Formula One, Formula Two, Marine Cuisine, etc) complimented with chopped frozen shrimp, squid and/or clams. Include dried marine algae that the fish can graze upon throughout the day. Angelfish are grazers and will not thrive on a “once-a-day” feeding regiment. Though somewhat territorial, this fish seldom becomes overly aggressive except to new arrivals to the aquarium. The Koran Angelfish will usually mix well with dwarf angelfish species (Centropyge) as long as they are added around the same time to the aquarium. This is just one of the specials this week at Tideline Aquatics. Print off the coupon at: [www.tidelineaquatics.net](http://www.tidelineaquatics.net)



**ADULT COLOR PHASE OF THE KORAN ANGELFISH**

### **What's New At Tideline**

#### **FEEDERS (NOW IN STOCK):**

Feeder Guppies, Feeder Goldfish, Feeder Rosy Redds, Feeder Crayfish, Feeder Fiddler Crabs. **Feeder Live Black Worms AND Ghost Shrimp are running out fast – new shipment arrives next week!**

## **FRESHWATER FISH (ARRIVED TUESDAY):**

M/L Uaru Cichlids, Medium Jack Dempsey Cichlids, Assorted Fancy Guppy Pairs, Male Crowntail Bettas (these are beautiful), Regular Tiger Barbs, New! Round-Banded Barbs (Cool Markings), Medium Assorted Peacock Cichlids, Electric Blue Johanni Cichlids, Jacobfreibergeri Peacock Cichlids, Borneo Sucker Loaches, Corydoras agassizi Catfish, Corydoras punctatus Catfish, Corydoras schwartzi Catfish, Peacock Eels, Tank Bred! Black Ghost Knives, Bleeding Heart Tetras, Super Sized Emperor Tetras, Large Florida Bred Neon Tetras, Harlequin Rasboras, Starfire Red Glo-Fish™, Orange Speckled Gold Severums, Large Angelfish and more. We have a massive selection of fish this week folks!

### **German Stendker Discus Arriving On Friday!!!!**

All 3"-4" Size: Flachen (Metallic Green), Red Pigeon Blood, Marlboro Red, Red Scribbled, Blue Diamond and Blue Cobalt Varieties. Want to check out these beauties on the web? See the actually hatchery photos at:

[www.diskuszucht-stendker.de/pages/about\\_us.html](http://www.diskuszucht-stendker.de/pages/about_us.html)

## **LIVE AQUARIUM PLANTS (NOW IN STOCK):**

Red Narrow Leaf Ludwigia, Amazon Sword Plants, Ammania Plants, Bacopa Bunches, Rotala Indica, Potamogeton Gayi, Wisteria (Hygro. Difformis), Moss Balls (cool), Dwarf Sagittaria, Monosolenium tenerum, Java Moss (finally), Java Fern, Anubias nana (the dwarf anubias), Ludwigia Peruensis (red color), Broad Leaf Red Ludwigia, Anubias Barteri on Driftwood, Anubias Hastifolia on Driftwood.

## **GOLDFISH, KOI AND POND PLANTS (NOW IN STOCK):**

We still have a good selection of koi in our pond area though pond plants are coming to a close for the season. Get a great deal on this years plants by using the coupon on our website!

## **SALTWATER FISH (EXPECTED WEDNESDAY AFTERNOON):**

Indian Ocean Juvenile Koran Angelfish, Indian Ocean Firefish Gobies, Indian Ocean Algae Blennies, African Powder Blue Tangs, Red Sea Purple Tangs, Large Fiji Arrowhead Wrasse, XL Hawaiian Achilles Tangs, New! Rooster Blennies (?), **Caribbean French Angelfish** (Juvenile – **look Ben!**), Cebu Starry Algae Blennies, Bali Blueface Angelfish, Sumatra Ocellaris Clownfish, Coral Sea Maroon Clownfish, Small Cortez Zebra Moray Eel, Sri Lanka Diamond Sifter Gobies, Assorted Nano Gobies (will know on Thursday!), Indian Ocean Antennata Lionfish, Rare! Indian Ocean Bluefin (blackfooted) Lionfish, Hawaiian Fathead Anthias, Fiji Large Pajama Cardinalfish (Hard To Kill!), Fiji Blueline Rabbitfish, Fiji Orange Spotted Rabbitfish, Cortez Blue Spotted Jawfish, Hawaiian Humu Triggerfish, African Mappa Pufferfish, True Black & White Ocellaris Clownfish (Tank Bred), Indian Ocean Fumanchu Lionfish, Indian Ocean Jans' Pipefish, Indian Ocean Red Spotted Blennies, Africa Radiata Lionfish and lots of Evil Assorted Damsel fish! Please call on availability, as our actual order does not arrive until Wednesday afternoon. Until that time, we cannot confirm what actually arrives on the order.

## **SALTWATER INVERTEBRATES (EXPECTED WEDNESDAY AFTERNOON):**

Trochus Snails, Cerith Snails, Nerite Snails, Pink Margarita Snails, Neon Green Alveopora Corals, Bright Red Cynarina Meat Corals, Orange Fan Sponges, Assorted Indian Ocean Sponges, Bright Green Fox Corals, Tiger Pistol Shrimp, Spiny Cup Pectinia Corals, Orange Tubastrea Corals, Orange Linkia Reef Starfish, Red Fromia Reef Starfish, Anemone Shrimp, Sexy Shrimp, Cleaner Shrimp, Large Sand Sifter Nassarius Snails, Long Tentacle Anemones, 100lbs Premium Fiji Live Rock **AND FINALLY, Tonga Ultra Branch Live Rock (140lbs)!**