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Saltwater Aquariums

We see lots of aquarium keepers who are enjoying the freshwater hobby and look at saltwater aquariums in our store and say “Oh, I’ll just stick with fresh- The fish sure are beautiful, but salt is just too hard.” Well, that is a wives’ tale as far as I am concerned. Without a doubt, there is a learning curve and I wouldn’t suggest anyone who has never kept a fish tank start out with salt, but the care is very similar for both. Good, clean water is the key to success in any aquarium, fresh or marine. This is achieved by filtration and partial water changes. Nutrition and additives are the second component, and this is also true in either aspect of aquarium keeping.

Difficulty/Differences from Freshwater

Well, I would be lying if I said that keeping a saltwater tank is as easy as keeping a Betta bowl. But all of the principles of marine aquariums are similar (when not identical) to keeping freshwater. Without a doubt, it costs more to setup and maintain a marine tank than a freshwater aquarium. First of all, salt costs money and must be mixed into the aquarium water. Then you need an instrument to measure the level of salt. A cheap hydrometer will suffice, but they can be less than reliable. Bubbles can stick to the arm that rises and give you a false reading.

A refractometer is more accurate, but not necessary for keeping most fishes and inverts. Filtration is more important, to put it in the broadest of terms. Marine animals come from HUGE bodies of water where there are millions of gallons to dilute any toxins. They are not adapted to survive in a 100 gallon aquarium. It is your job to keep this water as close to what Mother Nature has to offer as possible.

In addition to a hang on the back power filter or canister filters, most hobbyists utilize wet/dry filters and protein skimmers. Many opt for UV sterilizers, ozone generators, denitrification units, live rock, calcium reactors, and all sorts of gadgets that will make the novice’s head spin- especially when they see the price tags. But all this isn’t necessary to keep a healthy marine aquarium, though they can help.

The better equipment you get, the less time you have to spend cleaning and getting your hands wet, just like in your freshwater tank. At the end of the day, the biggest difference is the actual salt. One thing to keep in mind is this –when water evaporates, only water is leaving the solution. If you sit a glass of salt water out and let it go dry, all the salt will be left in the bottom of the glass. So when you are adding top-off water to make up for evaporation, you just use pure clean fresh water, NOT salt water! And when you mix water for water changes, make sure the salinity is at the correct level or a little lower if its risen in the tank. Besides that, everything in my Aquariums 101 Care Sheet regarding husbandry also apply. So let’s talk about the fish!

Hardy Fish

There are many colorful and interesting fishes to choose from that will live in almost any well-cared for marine tank. Among these are Damsels, Clowns (the star of *Finding Nemo*), Groupers, Wrasses, Triggers, Basslets, Hawks, most Eels, Blennies, and Gobies. Not all of these are the most peaceful of aquarium inhabitants, so read up on the species you are interested in before buying. No compatibility chart will work in every system,

the fish do not read the manuals! Also know the full adult size of your choices before buying that cute little juvenile.

There are many on the market that are “tank busters” and you can bet that they won’t stay small just because the glass box they live in is small! Fish do not grow to the size of their aquarium, in spite of the longevity of that wives’ tale. The Internet is a great source of information, and most pet shops will warn you if you are considering buying one of these fish. Sadly, you may run into folks who simply don’t know, but this is less likely at smaller pet shops, where you can take advantage of the owner’s experience. To be on the safe side, it is best to do your own homework before purchasing any fish.

Delicate Fish

Whew, this is going to be tough. There seems to be a bulletproof species in every category, and some delicate fishes do great in some aquariums. But here a few that you definitely don’t want to start that newly set-up tank out with: Angels, Tangs, Butterflies, and Seahorses. These fish won’t withstand neglect. They are far from hard to keep alive for many years, as they require proper nourishment and water conditions. If you are prone to go months without a water change, these species are not your best option.

Fish to Avoid

Again, there are probably going to be people keeping these species emailing me with accounts of how long theirs have lived. I welcome these emails, but if you consider any of these fish for newcomers to marine keeping, I’d love to know your reasoning.

Here goes: Banded Angels, Multibarred Angels, Red-head Butterflies, Ornate Butterflies, Meyer’s Butterflies, Redfin Butterflies, Chevron Butterflies, Four-Eyed Butterflies, Banded Pipefish, Moorish Idols, Blue Ribbon Eels, (to a lesser degree) black ribbon eels, any butterfly perch, and sea dragons (the tessellated seahorse). These fishes just do not live long in captivity, period. I know of a few Moorish Idols and one blue ribbon eel that have made it past the one year mark, but these are in expert hands. I won’t even carry them in my store, and make sure anyone trying to special order them knows what they are getting into. Why buy something being caught out of the ocean when it is almost sure to die?

Oh, I’d be remiss not to add venomous fishes such as lionfish and scorpion fish to this list. The sting of these is no joke. You won’t likely have to get your hand amputated if a lion stings you, but a scorpion or stonefish can be deadly. These (and blue ringed octopus) should never be kept by a novice.

Some thoughts on water

A great investment for the marine aquarium keeper is a home water filtration unit. Look for RO/DI (reverse osmosis/deionization) for the purest water you can mix your salt into. If you opt to use water straight out of the tap, odds are good that you will run into algae problems. There are trace nitrates, phosphates, and silicates in tap water. While safe to drink at these low levels, they are nutrients for algae to grow –essentially fertilizer. Do NOT use water softening units, these serve a very different function and most people would be better off using straight tap water.

Algae

Most new tanks will go through a phase of having brown diatoms, then red cyanobacteria. This is normal as long as the growth doesn’t get out of control. If algae is problematic, this indicates that the aquarium is not healthy. There are too many nutrients in the water. This can come from the tap water, overstocking, uneaten food or inhabitant die-off. Adding chemicals to kill algae is a band-aid and often causes more problems than it solves. The algae are pulling nitrogen and other toxins out of the water. In some cases, the algae growth is the only thing keeping the inhabitants of the aquarium alive! Partial water changes, better filtration, smaller

feedings, cutting back the light period and using RO/DI water will usually correct this problem; just remember that nothing good happens fast in an aquarium.

Clean Up Crew

Most saltwater keepers have hermit crabs, snails, emerald crabs, and algae eating fishes to help keep algae at bay. These are very effective, but it is important to add the right ones for your aquarium. Emerald crabs are arguably the most effective of the bunch, though they can grow large and catch and consume small fish and other inverts.

If your tank reaches over 80 degrees, “Turbo” snails will likely perish, as they come from cooler waters of Mexico. Astrea snails will tolerate higher temperatures, but only eat film algae –hair or strand algae will be ignored. Nerite snails are great algae eaters, but they do not live submerged their whole lives. Without a place to climb out of the water, these great eaters of most forms of algae (even diatoms and cyano) will not survive long term in aquariums.

Hermit crabs are good omnivorous additions to aquariums, just keep extra shells for them. They will kill snails to get their shell if there aren’t empty ones around. Sand sifting stars are best left in the ocean –most eventually starve after they have depleted the nutrients in the aquarium sand. Lawnmower blennies and such are pretty good algae eaters, but don’t expect them to work miracles. They can’t eat at the rate algae will grow in a system with high nutrients.

- Chip Bridges