



Mysteries of the Moon Snail

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Just recently GCBO's biology intern, Morgan, and I were surveying Quintana Beach for non-breeding wintering plovers. We did not find any plovers, but we did find something very strange; weird grayish brown rubbery things in the sand. Being the curious biologists that I am, I immediately wanted to know what they were and how they got there. The answer may surprise you, but believe it or not these things turned out to be egg masses left behind by none other than the Moon Snail.

When people hear or see the words Moon Snail, they often automatically think of its beautiful spiral shell which is highly collected by prized beach combers such as myself. What they don't think of, is the creature that used to live in it. Moon snails are rather odd creatures. They are marine snails that spend most of their life along the shallow shore and move to deeper water in the winter. The strange objects we discovered on the beach are actually called sand collars which actual makes sense when you are actually looking at them in person. The sand collars we found used to contain thousands of baby snails or veliger. Unlike land snails which are hermaphrodites, meaning they contain both male and female parts, Moon Snails are separated between male and female. Therefore, a male and female are needed to reproduce. The female has a rather clever strategy when it comes to her babies' survival. To make sure that her babies survive, she creates this gelatinous mass out of mucus that looks similar to a jello mold from an old 70's cookbook. When this mold is mixed with sand, it creates a cemented rubber structure which helps it suction to the bottom of the shore. This gives the babies ample time to grow and when it's time, the sand dissolves and the babies are set free in the water.

Now that we know how they reproduce, what is even weirder is how they feed. Moon Snails are actually predators and they feed on bivalves, such as clams, and in most cases each other. They are only herbivores when they are veliger. Some of you fellow beach combers may often notice a perfect little hole when you pick up a shell. This is often a trademark of a Moon Snail attack. You see, moon snails have this tongue like structure called a radula which has seven rows of teeth. Think of it like a roll of sandpaper. The radula helps grind down the outer layer of its victim's shell. What the victim doesn't know is that the Moon Snail has a secret weapon and that is powerful enzymes mixed with hydrochloric acid that breaks down the shell and liquefies the living tissue inside. Like a vampire, the Moon Snail literally sucks the tissue out through its mouth or proboscis and digests it. Depending on the size of the victim, the Moon Snail can spend up to a day or so feeding on one clam; however, it is capable of eating up to four clams a day. Now these guys may seem like vicious predators, but they are no match to hungry sea stars, oyster drills, and fish. Just goes to show, you never know what you might discover on the beach. On behalf of Gulf Coast Bird Observatory, thank you for reading.

Photo caption: Sand collar found on Quintana Beach in Freeport, TX.