



## INDEPENDENT STUDY: Module1, Class 8

Please note: The pictures and comments in the transcript and recording below have been gathered over many years and where possible, I attribute them to their original source. If anyone connected with these photographs or comments would like them removed, please notify me and I will be happy to comply.

The recording for Class 8 is almost 35 minutes and can be found in your attachments.

CLASS 8: Shell #s: 37, 30, 54, 64, 88

In Class 7, we began our conversation about the variety of reproductive methods employed by mollusks. You learned that some are hermaphrodites containing the sex organs of both genders within an individual. This allows each animal to increase the population with fertilized eggs. You also met the slipper that begins life as a male and completes its life cycle as a female.

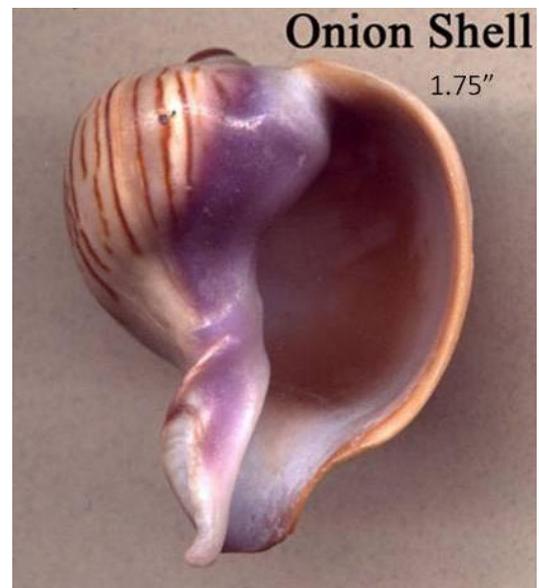
We discussed the fact that heterozygous reproduction occurs with some mollusks, and that thousands, even millions of eggs, are produced. They are abandoned to the whims of fate where very few survive.

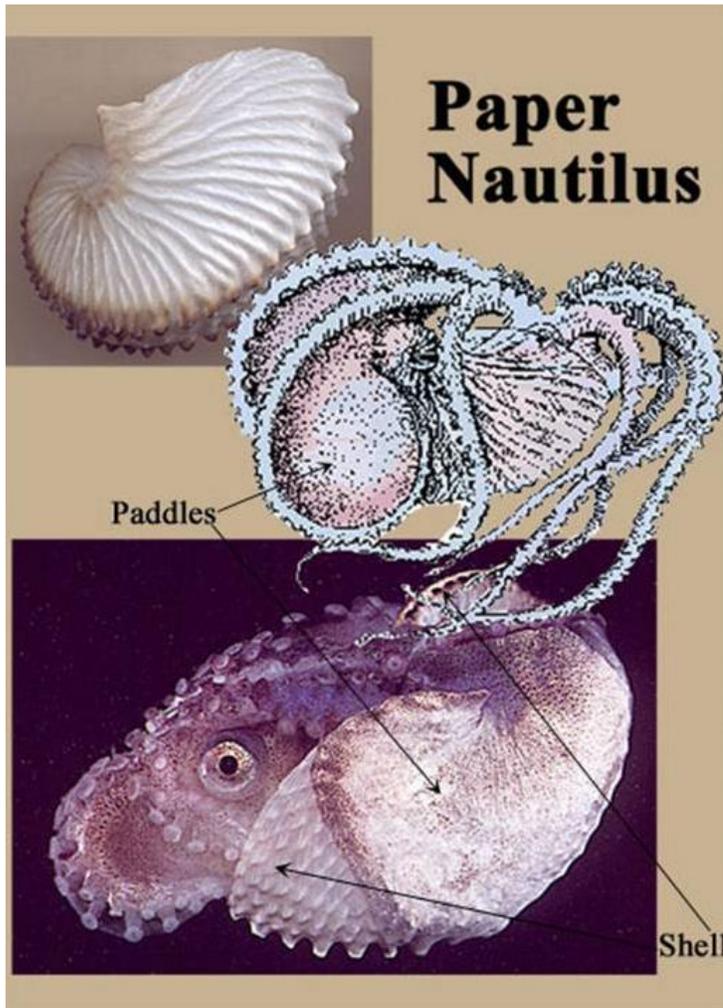
<http://blogs.evergreen.edu/ebestiary/files/2012/05/noodle2.png>



One mollusk who did not abandon her eggs was the octopus. Her devotion is so extreme that she doesn't leave them the entire time her eggs are maturing. Depending upon the species, this could be 4 or 5 months until they hatch, and her weakened state leads to the ultimate sacrifice. Despite her maternal care, only 2 of her 200,000 eggs survive.

You discovered that this level of devotion is unequalled among mollusks, but the onion does come a close second. Instead of laying thousands of eggs, she only lays 3 eggs. However, the onion is unique because they are attached to her shell increasing the odds of survival of all 3 children. For this reason, in *Ocean Oracle*, the Onion Shell represents “*Devotion and dedication, especially regarding motherhood.*”





Now it is time to introduce you to a relative of the octopus. This is the **Paper Nautilus**. The shell is #37 in *Ocean Oracle*. As you can see from the drawing below the shell, the paper nautilus resembles its cousin, the octopus. In fact, if you ask me, I think it is poorly named because it is not anything like the other nautilus you met in the first class...the chambered nautilus.

The chambered Nautilus shell is divided into chambers, and the mollusk has over 90 arms. In contrast, the Paper Nautilus Shell has no chambers, and the paper nautilus has 8 arms. Most important, only the female paper nautilus makes a shell. She is much larger than her male partner who never makes a shell. This is called sexual dimorphism.

If you read about the sexual dimorphism of the dwarf male clam at the end of last week's transcript then you are aware that sexual dimorphism is a difference in size, or color, or form between different sexes of the same species. That clam is the most extreme example of a difference between the sexes that I have ever encountered in the molluscan world. The male degenerates until all that is left of his anatomy is a functional testis.

When it comes to the Paper Nautilus, the male remains intact, but much smaller than the female (sources vary from 1/3-1/6<sup>th</sup> the size of the female.) And he never makes a shell. If you look at the drawing above, you will see she has 8 arms like an octopus, but two of her arms have large paddles at the end. These secrete the parchment-like material for this shell, which is only made when she lays her eggs. The shell serves as a cradle. In the lowest picture, you can see a paper nautilus with her paddles serving to secure her in her cradle with its precious cargo. The paper nautilus is also called an argonaut possibly because sailors mistook the paddles on these animals for sails.

In seashell divination, since this "shell" represents a birthplace, it means "*Spiritual birth; great awakening.*"

After her babies hatch, the Paper Nautilus Shell has served its purpose, and is abandoned to the ocean currents. With her cradle gone, the female nautilus resembles a larger version of the male population who lack shells their entire lives. The female remains shell-free until she reproduces again.

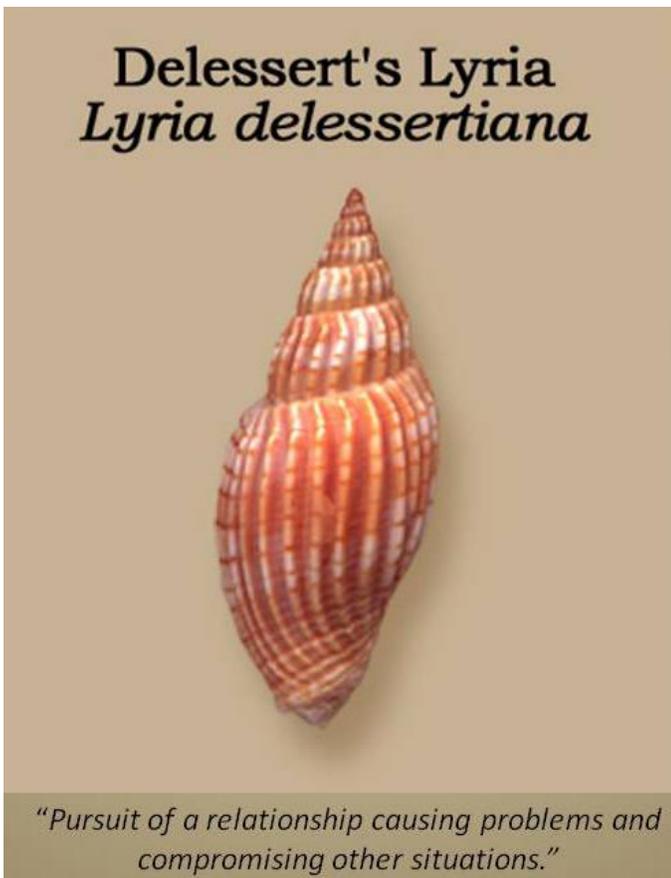
One of my students sent me a wonderful website. It features photos of a very unusual situation where a female paper nautilus washed up on a beach with her cradle. It is not common for this to occur. Usually, her eggs hatch, and she releases the cradle leaving her shell-free. These photos capture the delicate nautilus without her shell. This is such a rare opportunity! On the next page, I have included photos from this site so that I can point out a few features on her body. You can really notice the resemblance to the octopus when she is free from her shell.



Here is the link to the website that is the source of these [pictures of the female paper nautilus](http://www.seabeam.com/ThingsThatFloat/papernautilus/):  
<http://www.seabeam.com/ThingsThatFloat/papernautilus/>

And here are a few videos so you can see the live mollusk in action:  
<http://www.youtube.com/watch?v=hMokicXNQHo&NR=1> [Video of paper nautilus](#)

[http://www.youtube.com/watch?v=GWw\\_DqBVxjI&NR=1](http://www.youtube.com/watch?v=GWw_DqBVxjI&NR=1) [You can see her release ink](#) at 2:26, and you will see an excellent close-up of her paddles at the 3-minute mark.



When it comes to the drive to reproduce, there is one shell that I want you to meet. **Delessert's Lyria is #30** in *Ocean Oracle*. These mollusks reside in deep water. They will, however, venture into shallow water to mate. This is the only time capture is possible. It is the mating instinct, and hormones, that cause a problem for Lyria. Translated into human terms, our body chemistry can create compromising situations. The meaning associated with Lyria is *"Pursuit of a relationship causing problems and compromising other situations."*

As long as we are on the subject of reproduction, let's look at their life expectancy. We have seen what a slim chance mollusk eggs have of surviving birth. From an initial count of many thousands, only a handful survive. Of those that make it, most mollusks live less than 5 years. The Chambered Nautilus is the longest living cephalopod with a life expectancy of 15-20 years.

However, there is one outstanding exception to mollusk life expectancy.

Do you remember the Geoduck Clam with the long neck? They have been known to live 160 years. That is time to produce many generations of eggs. In the website mentioned in Class 6's transcript, you may have read that "A female geoduck produces about 5 billion eggs in her century-long lifespan—in comparison, a human female produces about 500 viable ova during the course of her life."

Even more amazing is a story of the tenacity of life for land snails.

One famous story took place at the British Museum when two snails were received on March 25, 1846. The two specimens had been collected in Egypt some time previously. They were fixed upon tablets and placed in the collection of the museum. There they remained glued to the tablet until about March 15, 1850. Four years after they arrived, someone examining some shells in the same case noticed a recently formed epiphragm over the aperture of one of the snails. (An epiphragm is a temporary operculum some land snails create using mucus.) On removing the snails from the tablet and placing them in lukewarm water, one of them came out of its shell. The next day it ate a cabbage leaf. A month or two afterwards it began repairing the lip of its shell which was broken when it was first adhered to the tablet.

If that 4 year "deep sleep" were not impressive enough, there is an 1877 record of snails from Cerros Island (near Belize, Central America) living without food from 1859 to 1865.

A moment ago, during our discussion of longevity, you were introduced to a new term...epiphragm. I mentioned that it is like a temporary operculum some land snails make using mucus. I thought I would elaborate upon this, and expand into the many magical uses of mucus.

Remember the snail that had been fastened to a tablet for 4 years until an observant scientist spotted the epiphragm that had formed? Placing the snail in tepid water made all the difference. The mollusk came out of its shell and was eating cabbage leaves and repairing its shell that had been damaged when secured to the tablet. I need to explain that sometimes the function of the operculum door is not to protect the mollusk from predators, but to protect it from intolerable environmental conditions. Land snails have the ability to use mucus to form temporary epiphragms. This is beneficial during dry seasons in order to preserve the moist conditions inside the shell while allowing oxygen to pass in and out of the shell.



If you look at the snail in this picture, you will see one of the land snails you met during our class on reproduction. You learned that land snails are hermaphrodites. This particular Green Tree Snail is from Papua, New Guinea. My brother happened to be in Papua New Guinea, and sent me this shell. I had never seen a green shell before and immediately consulted my books. I discovered that it was a land snail, and the green is perfect camouflage for it to hide among the

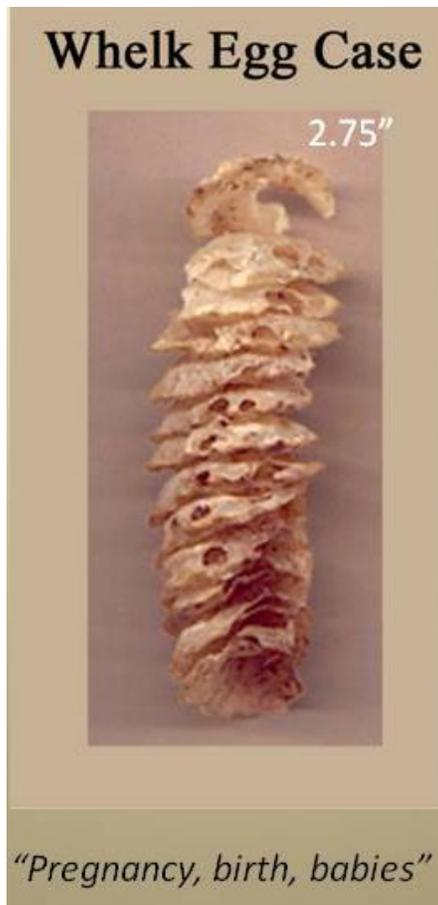
leaves. I also learned that there are times of the year when the climate is intolerable in New Guinea, and these snails go into hibernation by plugging up with mucus forming epiphragms. The technical term for mollusk hibernation is aestivation. They wait until the climate has returned to conditions where they can function, and then they come out of their aestivation. Because of literally waiting for a change of comfort zone to re-enter the world, in *Ocean Oracle*, #54, **The Green Tree Snail** is about "Willingness to change one's comfort zone."

In New Guinea, these dry spells seem to be seasonal, but as you learned with the snails fastened to the tablet in the British Museum, some snails can hibernate for years if need be.

<https://www.youtube.com/watch?v=h6UWZnwBb-U> [Video of forest people from Papua New Guinea](#) meeting white men for the first time...talk about a change of comfort zone!

I had a very personal experience when this Green Tree Snail Shell came into my life. It was early in my shell reading development, but I had moved from Boston. I was comfortable with reading for family and friends, but had not ventured beyond that safety zone. My comfort zone was changed by of all things...the summer Olympics. I was watching people jump higher and farther than seemed humanly possible, and I recall thinking they had spent many years training to be able to do this. Nobody thought they were weird because they could out-leap most other humans. That led me to conclude that I had spent many years reading books on shells. If other people had spent as much time reading the same books, they would be thinking there was a language of shells just like I was, and it was really not so weird after all.

Of course, this insight occurred just when my brother sent me the Green Tree Snail Shell. With this new confidence, the next day I went to the hospital where I worked and told another lab technician who liked seashells that they had a language. She was eager to experience a reading, and the next thing I knew she was selecting shells at my house.



She picked out two egg cases. At the time, the Paper Nautilus was about birth...and she picked out this **Whelk Egg Case which is card #64 in Ocean Oracle**, and is about birth. She had only been married a month, and I knew she did not want to be pregnant already. I told her that she was about to have a great spiritual birth...an awakening. The next week, when I was on lunch break in the hospital cafeteria, she spotted me from across the room and yelled... "Hey Shelley, remember that reading you did for me?" I was shocked because I was still keeping a low profile, so I just muttered "yes". Not content to end with that, she called out "Remember what it was about?" I remember thinking, "This can't be happening." I wanted to crawl under the table. In an effort to cut this conversation short, I muttered one word..."birth". Suddenly everyone near her gasped and turned in my direction because she had just been tested in our lab that morning, and she was pregnant. The shells picked up on that a week earlier, but I tried to make the message be what I thought she would want to hear. That taught me several things. Most important is to get out of the way of the message. Since she was asking me these questions in the cafeteria, obviously she had already put two and two together and recognized her message. This exchange also helped me distinguish between the **Whelk Egg Case, #64 in Ocean Oracle** and the Paper Nautilus. The Whelk Egg Case designates pregnancy and birth. It is the animal's egg case. Look what happened when I tried to make it mean anything else. Remember the value of intention. It was intended to mean pregnancy and birth, and I should never have altered

the meaning after the fact to fit my notion of what the client wants to hear. As readers, we need to get out of the way of the message. If you look closely at this Whelk Egg Case, you can see the holes where the baby whelks burst out of their egg capsules. Paper Nautilus, on the other hand, signifies spiritual birth because as you learned earlier in this lesson, it is the cradle.

As for the Green Tree Snail, I thought I had changed my comfort zone enough to speak up to one person in my lab. I never expected that to end up being broadcast through the cafeteria.

This shell is such a terrific indicator when it appears in a reading because if someone is attracted to it, that person is ready to change their comfort zone...been there, done that, don't want to do it anymore. If someone is bothered by this shell, they are not ready to make any changes. They may even see that their life has challenges, but they would rather stick with the known than to venture into unknown territory. Some people are ambivalent, the shell gets their attention, but they don't hate it and don't love it. This means that they see what they are doing may be limiting them, they are considering making a change, but they are not ready to embrace a new behavior. Did you all follow those three ways of working with the Green Tree Snail as an indication of a client's comfort zone?

I once did a shell reading for someone who made it very clear that the Green Tree Snail bothered her. This was using my home collection of close to 500 shells, and she just really did not like that one shell. As I performed the reading using the shells she found attractive, we discussed her message. She saw that she was operating on automatic pilot in a way that did not serve her. As we finished her reading, she looked back at the Green Tree Snail, and said, "You know, that really is kind of pretty." I could barely keep my jaw from dropping. I never saw a message work that fast before. Once she was aware of her hidden belief, she decided that was getting old, which was reflected by her new appreciation for the Green Tree Snail. She left ready to implement some major changes.

With the many times this shell has revealed someone's status as far as comfort zone, I must tell you how fortunate I am to have it.

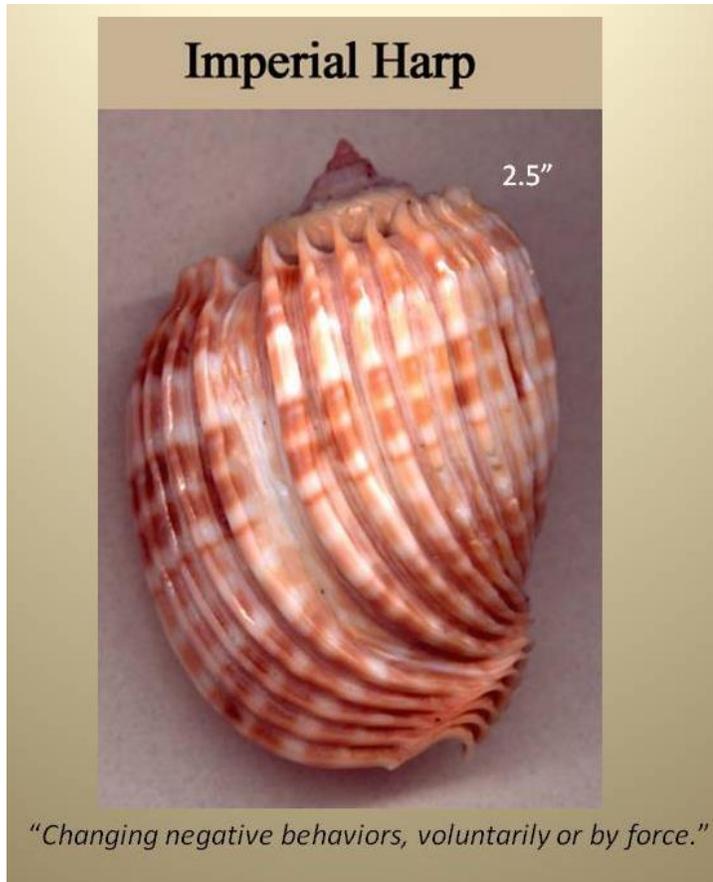


In 2002, when I first wrote *Ocean Oracle*, it was self-published on my computer. I was visiting my parents during their vacation in Florida, and my proud parents had taken my computer-printed, spiral-bound *Ocean Oracle* to a shell store to show the owner. I used perforated business card stock to make the cards. As he flipped through the pages, he spotted the Green Tree Snail (#54) and froze. Then he asked me where I got that shell. I explained that my brother mailed it to me when he was in

Papua, New Guinea. That explanation seemed to satisfy him, but his next words shocked me. He said that if he carried that shell in his store, he could be fined \$10,000.00. He elaborated upon this by telling me that they were on the protected species list.

Apparently, someone went to New Guinea and could not find these snails, so they went to the government and got them declared endangered. I wondered if this person went to New Guinea while the snails were hibernating. If so, then of course they would not find any.

I don't know the answer to this, but I am grateful to have this "change of comfort zone" shell for you to use in *Ocean Oracle* because I don't think you can get one anymore. Just as with my good fortune to get the Onion Shell, here is another that seemed intent on arriving in time to contribute to *Ocean Oracle*. It was as if the shell knew that one day I would write this book, and it used my brother's trip to New Guinea to get to me before that would no longer be possible.



Let me tell you about one more shell in *Ocean Oracle* that seems to share that mindset. It is called the **Imperial Harp**. In *Ocean Oracle*, it is shell #88. As you can see by its number, it belongs to the Interaction with Man category (shells #66-106). This is the national shell of Mauritius, an island off the coast of Africa. As their national shell, to prevent the shell's extinction, they requested that tourists refrain from collecting them. This request fell on deaf ears, and they eventually had to make it against the law to collect the Imperial Harp. Based upon this history, the meaning for the Imperial Harp is "*Changing negative behaviors, voluntarily or by force.*" Mauritius authorities tried to make tourists comply with their request voluntarily, but eventually they had to resort to forcing tourists to behave using the law.

The only way for a collector to own an Imperial Harp now is to obtain it from another collection. Someone who had this shell willed his collection to a shell store and the estate shells were able to be sold to customers. I knew nothing about this situation with the Imperial Harp and Mauritius when I was in the

shell store. In fact, the one they had is missing a rib, as you can see in this picture, so I asked if they had any others. That was when I learned that this was an estate shell, and how fortunate I was to find one available at all. Once I heard about the circumstances for obtaining an Imperial Harp, I knew the meaning it would contribute for my clients' shell readings. Here is a third case of a shell coming to live with me in preparation for the day I wrote *Ocean Oracle*. The shells were assembling before I ever dreamed of writing the book. Isn't that amazing?

Here is one shell that cost around \$500. [http://www.hydroponiconline.com/store/Shell-Harpa-costata-Seashell\\_170654255812.html](http://www.hydroponiconline.com/store/Shell-Harpa-costata-Seashell_170654255812.html)

[http://www.shellauction.net/auction\\_shell.php?id=235457](http://www.shellauction.net/auction_shell.php?id=235457) Example from someone selling this shell...you will see the note that [exportation from Mauritius is prohibited](#).

I was going to teach about three other shells, but I will save them for your next class. Instead, I will tell you one more situation where the Green Tree Snail taught me a huge lesson. It is my hope that these stories will assist you when you see the Green Tree Snail in a reading you do in the future.

A perfect example of this occurred during my 25th college reunion. As an author, I was one of several students who were invited to give a presentation to those gathered on campus. As I may have mentioned, I was always extremely shy. In college, a professor pointed to me and one other student and said we were the only ones allowed to talk that day because we hadn't said anything all year. I was so shy that I barely knew any of my classmates, and I had not attended any of our reunions. Now, 25 years after graduating, this reunion would be my private gift to myself...returning to the scene where I was so shy, and giving a speech. I looked at my Green Tree Snail, and was congratulating myself on how far I had come. I would be speaking in front of members from many graduating classes, but I knew only the people interested would attend my presentation on seashell reading. That relaxed me because the rest of the alumni would never even know I was there. The day before the reunion, I was checking in. I visited the briefing center to pick up the catalog detailing the various presentations being offered. I was curious to learn where I would be speaking because I brought lots of shells with me, (including my Green Tree Snail) and I wanted to set up in advance. Each speaker was assigned a room, but when I found my information in the catalog, there was no room number. I asked at the desk, and was informed that this was an oversight, but the person in charge of assigning rooms was not available. The people I spoke to were quite embarrassed, and assured me that they would figure something out in time for my presentation the next day. The next morning, when I arrived on campus, there were huge signs posted everywhere with just my seminar on seashell reading and the room number listed. So much for keeping my low profile by remaining hidden in the catalog. Everybody could see these signs. Just when I thought I was no longer shy, my college decided to one-up things, and I realized that I was being pushed yet again out of my comfort zone.

In our first class, I told you that one of my goals as your teacher is to share my spiritual growth with you. If you see that I am just like you, then you can be open to the amazing growth that will come your way. I told you this college reunion story because the Shelley back in college would never have imagined in her wildest dreams that I would be able to become a teacher or an author. I kept all of my thoughts to myself. And I never thought I would be giving television or radio interviews. That Green Tree Snail has been my partner for many years, and now here I am teaching all of you. You all have shell #54 in your decks, so if you choose, you can work with it to push you out of your comfort zones. I did not consciously decide not to be shy, the Green Tree Snail arrived, and the shells literally brought me out of my shell. Who knows what you may find hidden inside you?

After viewing the video of the paper nautilus earlier in this lesson, here are a few more details to appreciate about this newest member of your seashell family.

<http://www.lessonsips.com/docs/pdf/papernautilus.pdf> (Source of information below)

**The Paper Nautilus** *Although the Paper Nautilus has the same last name as the Chambered Nautilus and although they look somewhat similar in that both are rounded and coiled, the animals are actually not alike at all. The Chambered Nautilus shell acts as a house for the animal that lives in its outermost chamber. The Paper Nautilus shell is actually built by the female as housing for her eggs she places inside in long threads. The Paper Nautilus is closer to its relative the octopus, as both animals have eight tentacles and a rounded body. The female nautilus lives inside the shell while protecting her eggs. Her mate is actually about one-fifth her size. The name Paper Nautilus comes from the appearance of the fragile, thin, ribbed shell. It is a two-sided shell up to eight inches long. It resembles the shell of the Chambered Nautilus in that it is curved with a distinct opening at the end. But is it much thinner and stark white in color. The female secretes the substance that makes it before laying her eggs. When protecting the eggs, the female uses flap-like sails, which spread from the first tentacle pair over the shell. The flap-like sails can also be used to catch food. After the shell is no longer needed, it falls to the bottom of the ocean or is sometimes found on beaches and collected by shell collectors. The shell is considered a prize find because not only it is very beautiful, but also rare to find. It is very rare for a person to find a shell on the beach with a female still inside. Because of its deep-water habitat, the animal is rarely seen on the surface in the pelagic zone. When observed, the female nautilus is seen with her head and tentacles reaching out of the opening of its shell. The Paper Nautilus lives in tropical and subtropical ocean waters in the pelagic zone, the deep part of the ocean. Usually found on the surface, they look for food during the day. Octopus cousins usually live on the seafloor coming out of their caves or enclosures at night hunting for food. As such, they are called nocturnal animals. The Paper Nautilus has large eyes and a sharp beak as do most octopuses and both eject ink as a way to fend off predators. Females of both animals stay with their eggs until the young hatch. The Paper Nautilus preys on invertebrates such as jellyfish and salps - tiny, transparent barrel shaped animals that live in warm oceans. In return, larger ocean animals such as dolphins and tunas prey on the nautilus. When you discover the beauty of a Paper Nautilus shell, you now can appreciate the amazing feat of the female animal that created it.*