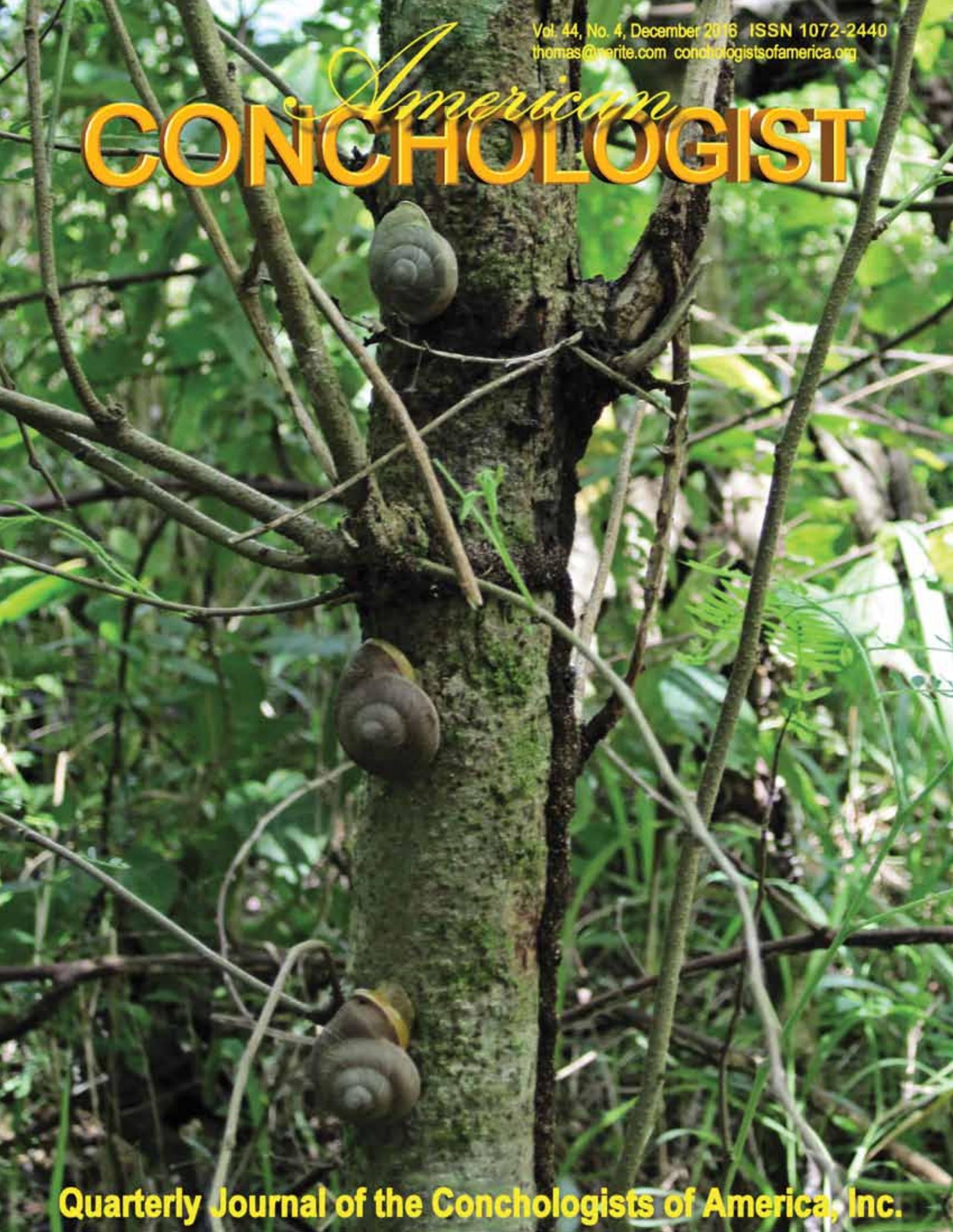


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*American*  
**CONCHOLOGIST**



**Quarterly Journal of the Conchologists of America, Inc.**

# CONCHOLOGISTS OF AMERICA, INC.



In 1972, a group of shell collectors saw the need for a national organization devoted to the interests of shell collectors; to the beauty of shells, to their scientific aspects, and to the collecting and preservation of mollusks. This was the start of COA. Our membership includes novices, advanced collectors, scientists, and shell dealers from around the world. In 1995, COA adopted a conservation resolution: Whereas there are an estimated 100,000 species of living mollusks, many of great economic, ecological, and cultural importance to humans and whereas habitat destruction and commercial fisheries have had serious effects on mollusk populations worldwide, and whereas modern conchology continues the tradition of amateur naturalists exploring and documenting the natural world, be it resolved that the Conchologists of America endorses responsible scientific collecting as a means of monitoring the status of mollusk species and populations and promoting informed decision making in regulatory processes intended to safeguard mollusks and their habitats.

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**Front cover:** Three *Pleurodonte carocolla* (Linnaeus, 1758) climbing a tree in Puerto Rico. These large land-snails are probably about 60 mm in size. And yes, that is a rather oddly symmetrical spacing on the tree. See the associated article by Matthew Blaine on page 4.

**Back cover:** *Amoria damonii* (Gray, 1864), cruising a rocky ledge off of Broome, Australia. There are two images of this species in the Rawlings article, but its colors are such that I [editor] thought it deserved an enlarged image. See the associated article by Charles Rawlings on page 10.

**Editor's comments:** Everyone should be aware by now that the 2017 COA Convention is 15-19 August in Key West, Florida (see page 40). This is shaping up to be a premier event. The locality is certainly unique. No other place is quite like Key West. It moves to a cadence all its own and we will be in the perfect spot to enjoy the Conch Republic. The Hilton Doubletree Grand Key Resort is a beautiful hotel with an atmosphere perfectly in tune with this part of the US. So okay, another COA convention. A chance to talk to old friends and meet new friends. A great locality for field trips and a beautiful hotel for presentations and dining. We all know, however, that it is shells that bring folks to these events. Several silent auctions, an oral auction, and the bourse – all offerings of those complex calcium constructs that first got us into conchology. So what about the shells? It just so happens that Donald Dan and a few others have been working overtime preparing a fabulous donated shell collection for this convention. The shells offered in this year's oral auction have a value that more than twice what we normally see for this event. Similarly, the silent auctions will be getting an influx of some really nice material.

**Emily and Susan Weiss** have donated the entire collection of very high quality shells accumulated by their father **Frederic Weiss**. As Donald Dan states, "The Key West oral auction will feature many extremely rare and highest quality shells from this collection. I am totally engulfed in shells, physically and mentally. Fortunately, it is shells, as I have no more other life. And they are FABULOUS SHELLS! It is like Christmas everyday."



**Above: the truck load of donated shells. Below: COA President Harry Lee and Emily Weiss, trustee for the Frederic Weiss collection.**

# Surf and Turf – Puerto Rican style

F. Matthew Blaine (photos by the author)

In September of 2010, Alan Gettleman, Dona Blaine, and Matt Blaine took a shelling trip with Peggy Williams in and around Puerto Rico. Since we are all interested in both marine shells and land snails, the trip would be a mixture of both. Surf and turf would be on our adventure menu for the next few days!

Our plan was simple. We would leave from separate locations in the US, and fly to San Juan, where we would meet. Peggy would rent a car and guide us to the many locations she knew. We would eventually circumnavigate the entire island and also drive across the central inland area.



**Fig. 1.** Our first motel accommodations near the airport with decorative painted walls.

After landing, finding each other, and putting our bags in the automobile, we were off. We headed to our first accommodation, which was a very colorful one that Peggy had used on earlier trips (fig. 1). After moving into our rooms and getting settled, we put on our swimming suits and then got our masks and fins ready for our first marine diving experience in Puerto Rico. We would have a quick visit to a sea-shore park location called Escambron Beach, near San Juan. The area we swam in was protected by large rocks to break the waves hitting the ocean side and stirring up the water inside the protected area. One interesting thing that I saw while diving there was a flamingo tongue (*Cyphoma gibbosum* (Linnaeus, 1758)), that was not on a sea fan. It was the first time I had ever seen one not directly associated with a sea fan (fig. 2). There were plenty of sea urchins to make up for the absence of sea fans, however (fig. 3).

We then returned to our room where we would have a quick meal and get some much needed sleep. Dona and I were awakened shortly after getting to sleep by a chirping



**Fig. 2.** Flamingo tongue, *Cyphoma gibbosum*, on a rock rather than the typical sea fan habitat.



**Fig. 3.** Sea urchins with very long spines!

fire alarm. Apparently the battery needed to be replaced, so we got the manager. We discovered that he did not have a replacement battery and could not leave the front desk for fear of being robbed. The manager eventually put us in another room that had a good battery in the fire alarm. We were fortunate there was a room available! Not having the fire alarm randomly go off through the night made for a much more pleasant experience. All in all we liked the rambling, colorful, and friendly establishment. It added to our appreciation of the Puerto Rican adventure. In the morning we discovered that there was a full coffee pot of high octane Puerto Rican (rocket fuel) coffee with tiny cups for the guests to kick start our day.



**Fig. 4. Dona checking through thick roadside vegetation for land snails.**

After coffee and cereal we headed off inland for our first full day of exploration and land snails. As we drove along we would stop and make a quick visual inspection to see if there were any snails in an area that looked promising and if there were any, we would spend some time looking (fig. 4). It is important to note that we would only collect dead, clean shells with no animals or soil whatsoever. As we progressed on our journey we stopped at a roadside vegetable and fruit stand to see what they had to offer and to purchase some baby bananas, which were sweet and delicious (fig. 5).

As the day went on we saw a tower peeking out above the tree line. It was part of the Arecibo Observatory. The observatory is home for the world's largest single dish radio telescope. It is used 24 hours a day, 365 days a year. The main collecting dish is 305 meters (1,000 ft.) in diameter, constructed inside the depression left by a karst sinkhole. It contains the largest curved focusing dish on Earth, giving Arecibo the largest electromagnetic wave gathering capacity. The dish surface is made of 38,778 perforated aluminum panels, each measuring approximately 3 by 6 feet (1 by 2 m), supported by a mesh of steel cables (figs. 6-7). To us, karst



**Fig. 5. The roadside stand where we purchased delicious bananas.**



**Fig. 6. The author and Dona at the Arecibo Observatory.**



**Fig. 7. Alan gets a closer look at the observatory sign and just by chance gathers a few wayward land snails.**



Fig. 8. (L to R) Peggy, Matt, Dona, and Alan – after the first day of collecting, waiting for our pizza.



Fig. 11. Carmen Painter's house on the water.



Fig. 9. Alan sorts through forest floor grunge looking for land snails while Dona and Olga (our host) look on.



Fig. 12. The group waiting for the author to get out of the water.



Fig. 10. Carmen Painter on her boat with a freshly caught king helmet (*Cassis tuberosa*).



Fig. 13. Carmen demonstrates how to clean a helmet shell.

sinkhole means limestone and limestone means land snails! We discovered that Arecibo not only attracts radio signals but also a variety of endemic land snails!

After a great day of exploration on the land we needed to restore our electrolytes before enjoying a pizza dinner and a good night's sleep. The next day we would be off for a full day of salt water shelling experiences (fig. 8).

When we woke the next morning in our new accommodations we went up to the second floor porch where we found Alan hard at work sorting and cleaning some of the treasures he had collected the day before. Dona and Olga Irizarry, a retired school principal, shell collector, and our host, watched as Alan meticulously sorted and cleaned his previous day's catch (fig. 9).

We headed to the water to meet our guide for the day, Carmen Painter (fig. 10) who lives in a floating house on the water and has a shell business (fig. 11). The sky was blue and the water was clear. We were about to experience a great day of snorkeling with the current and moving the boat along with us as we went. Carmen dove down and pulled up the anchor by hand. She then drifted for a few hundred feet under water with the anchor in hand. Finally, as she passed us, she released it and re-anchored the boat. We all eased our way along with the current and explored the beauty below us. After hours of great snorkeling everyone was in the boat waiting for me to GET OUT of the water (fig. 12). We noticed a big dark cloud, which looked quite ominous, heading our way, so we cranked the engine up and headed toward Carmen's floating shell workshop. Captain Carmen was careful to circle around the approaching storm, avoiding it completely. Once we got to her floating shell workshop she showed us how she cleaned shells, including relaxing the animals out of helmet shells (fig. 13). After a long and delightful day of shelling we returned to Olga's place in La Parguera, for a good meal and sound sleep.

We left the calm waters of southwest Puerto Rico the next morning, heading up and around the west side via Route 2. Along the way we stopped at several beach communities to purchase shells. Peggy knew a diver near Cabo Rojo who used scuba in deep water to collect Triton's trumpet shells, *Charonia variegata*, which he sold. We stopped and made a few purchases, then continued north along the coast, stopping at interesting places along the way. Eventually we made it to Hobo Beach, which is on the north side of the northwest corner of the island. When we got there the tide was way out. The sight was fantastic (fig. 14). We parked the car and made our way down to the beach where we found large rafts of drift made up of thousands of perfect small shells (fig. 15). There were even some small *Epitonium* species in the mix, which I was keen on collecting. I helped Dona collect things to use on a mirror frame that she had been planning and only kept a few specimens for myself, which I would later find glued to Dona's craft project. Alan



**Fig. 14. Hobo Beach at low tide.**



**Fig. 15. Dona and Alan hard at work sorting through thousands upon thousands of tiny shells.**

too was looking for specimen shells to add to his extensive collection. We all decided that Hobo Beach was definitely worth a return trip in the future.

It was time to head back to Olga's for our last night in La Parguera before heading up around the east coast the next morning. On this leg of the adventure we would be exploring some small inland roads along the way (fig. 16). We were in a mountainous area where there was a narrow road along the mountain edge and houses were built with the front on the road and the rest of the house cantilevered in space. We would stop and see what land snails were in these wild areas along the way (fig. 17). We watched Alan risking life and limb by climbing over a precipice covered in vines and limbs for one of the rare green snails *Polydontes acutangula* (Burrow, 1815) (fig. 18). We continued to explore the mountains around the national forest, but we needed to



Fig. 16. A small inland road along the east coast.



Fig. 19. Beach at the hotel near El Yunque National Forest – beautiful even without shells.



Fig. 17. An elusive green snail, *Polydontes acutangula*, hiding in amongst branches and leaf rubble.



Fig. 20. One of the narrow paths in the rain forest that wind up and around the mountain.



Fig. 18. Alan risking life and limb for one of the rare green snails. *Polydontes acutangula*.



Fig. 21. *Pleurodonte carocolla* (Linnaeus, 1758), hanging on a leaf in the rain forest.



Fig. 22.



Fig. 23.



Fig. 24.



Fig. 25.

**Figs. 22-25. Some of the marine shells that we encountered: 22. *Lobatus gigas* (Linnaeus, 1758), 23. *Charonia variegata* (Lamarck, 1816), 24. *Cymatium femorale* (Linnaeus, 1758), 25. *Cassis tuberosa* (Linnaeus, 1758)**

find a place to spend the night. We had driven and collected until we were exhausted. Eventually we found a motel that had a few rooms vacant for the night. It was located on a beautiful beach. Finally after driving around for a while, we found a Subway Sandwich Shop that was still open where we purchased a delicious dinner.

Early the next morning we packed our suitcases for the flight home later in the afternoon. It was important to have everything in the suitcases packed and our carry-on backpacks ready for the airport. After that there was time for a short walk on the beach at the motel. While the beach did not have many shells, it was beautiful (fig. 19).

After packing the bags in the vehicle we were off for our first visit to El Yunque National Forest! The plan was to take photographs and explore for a few hours before leaving to drive a short distance to the international airport for our flights home. This was also our first visit to a rainforest and we were excited. We would not be disappointed.

El Yunque National Forest has excellent paved roads with fire hydrants all along the way. As one would expect in a rainforest, it was raining for much of the time. There are paved paths that wind up into the mountains (fig. 20). We knew that we would not have enough time to take the long paths, but we could explore while keeping a close eye on our watches. All around us there was life (fig. 21). We could hear the famous coqui frogs singing, but we never saw one in the wild. It was finally time to leave this beautiful place and head to the airport. Dona and I decided that we would return some day to El Yunque and give it the time that it deserved, but for now we needed to get to the airport.

As I was going through the check-in process I had to put my backpack on the conveyer belt so that it could go through the x-ray machine. Everyone else had passed through before me when suddenly an alarm went off. A beautiful young female TSA officer came over to me and asked me if I had any liquids in my backpack. I told her that I did not. She took my pack and ran it back through the machine again and once again the alarm went off. She then opened my bag and looked at the things that I had in it, which were mostly clothes. She came over to me and asked me if I was a retired professor. I was an assistant professor for 7 years and I was retired so I answered yes. She asked me if I was Henry Van Der Schalie. Now it just so happens that Henry van der Schalie (1907 – 1986) was Professor Emeritus of Zoology and Curator Emeritus of Mollusks in the Museum of Zoology, University of Michigan and I happened to have a copy of his book *The Land and Fresh-Water Mollusks of Puerto Rico* in my backpack. The book was published in 1948 when I was one year old. I didn't think that I looked that old as it would have made me 103!

I remembered that there had been an article in the paper a few weeks before, describing a retired professor who was stopped by TSA because he had a bunch of strange containers in his carryon. They closed down the airport for that one. It was eventually found that he was just continuing the experiments that he had been working on before he retired. I guess she thought that she had a similar situation on her hands. What had actually happened is that I had inadvertently left a bottle of Deep Woods Off in one of the pockets of my pack. We used insect repellent copiously to avoid mosquito bites, which at that time not only carried Malaria but also Dengue virus in Puerto Rico. The bottle did not have more than two ounces left in it but they confiscated it anyway. The good news was that they let me board the plane and I would now have time to read *The Land and Fresh Water Mollusks of Puerto Rico*.

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# Into Bednall Country: The Land of the Tides

Charles E. Rawlings, M.D., J.D.

Imagine a land where the tidal range is over 35 feet. Imagine a land where, at low tide, hundreds of square miles of rocky reef lay exposed. Imagine a land where an outgoing tide creates such whirlpools that they can drag a boat to the bottom. Imagine a land where the deadliest creature is a jellyfish; where the great white shark does not even make the list of the top ten most dangerous animals. Imagine a land where you are an item on the menu of crocodiles – some the size of small buses. Imagine an aboriginal land, the area north of Broome – One Armed Point, this is Bednall's Country. Venture at your own risk conchologists but that is the destination for any chance of finding the magnificent *Timbellus bednalli* (listed in older references as *Pterynotus bednalli*). Lynn Murphy, myself, and internationally acclaimed guide, Josh Akerman, did just that. What we found was exceptional.

After three months at sea on the *Ann Holtzberg*, William Tompson (WT) Bednall arrived in Adelaide, Australia. He was a few days shy of his fifteenth birthday and in three months he held a position at the Adelaide newspaper, *The Register*. In February 1865, WT married Maria Jane Mason, with whom he had six children. Around 1862, WT moved to Magill, and in 1874, he moved to Darwin, where he became editor of the newly created newspaper, the *Northern Territory Times*. WT Bednall had always been fascinated by shells, but his time in the Northern Territory expanded his interest exponentially.

WT Bednall lived in Darwin for approximately 3 years, between 1874 and 1877, at which time he moved back to Adelaide. During his time in Darwin, WT ran the *Northern Territory Times* as well as becoming the first to compile the earliest known translation of the Larrakia language, the original language of Larrakia, the traditional Aboriginal peoples of Darwin and the surrounding Northern Territory land. More importantly, WT Bednall was the first to discover both the murex and volute which currently bear his name – *Timbellus bednalli* (Brazier, 1878) and *Volutoconus bednalli* (Brazier, 1878). For conchologists, he is best known for



The presently recorded range of *Timbellus (Pterynotus) bednalli*.

these discoveries, two of the Holy Grails for shell collectors. After WT's discovery, Brazier quickly validated both his newly discovered finds as new valid species and they were subsequently described in the *Proceedings of the Zoological Society of London* in 1880 ("Descriptions of three species of marine shells from Port Darwin, Torres Straits discovered by W.T. Bednall; and of a new *Helix* from Kangaroo Island, South Australia by Angas, George French"). Since their discovery, both species have been listed as rare and are highly sought after by collectors.

Over the years, the known range of Bednall's murex has gradually enlarged as a result of intrepid explorers and collectors. Currently its range is limited to north and west Australia from perhaps the region of Broome to Darwin. It is not a common shell and is most commonly found in some of the most dangerous marine environments in the world – the Land of the Tides. As a result, this is where Josh Akerman makes his appearance. Josh is not only a true Australian explorer, but also probably the world's expert on finding Bednall's murex. When I decided to photograph a living Bednall's murex he is the collector I contacted. He is the best of the best!



**Landing strip leading into Bednall's Country.**

To travel to prime *T. bednalli* habitat, the itinerary reads like this: Charlotte to Los Angeles, Los Angeles to Sydney, Sydney to Perth, Perth to Broome, single engine Cessna from Broome to One Arm Point (thusly named for the sharks that will remove one arm out of two if you dip them in the water), and finally a boat ride of about an hour over water teeming with crocodiles to an uninhabited island. It is on this island, where ancient sandstone and basaltic ledges are exposed by the huge spring tides, that certain murexes are located. In addition, under these ledges are found *Timbellus bednalli*. Oh and by the way, these tides that expose the shells occur only about 12 days out of the year. So good luck finding them! Of course we had our secret weapon, Josh. To illustrate, over the course of an hour diligently searching, I could find one – Josh found nine. At that point he merely walked by a ledge and, in doing so, he absently pointed to this same ledge, which was about 50 feet in length, and commented that there was a *T. bednalli* under it. Moreover, I could have it if I could find it – if not I sucked as a *T. bednalli* collector. Yes, I finally found it, my small one measures about 72mm; the one from under the ledge measures about 80mm. My partner, Lynn, found other species but couldn't locate a *T. bednalli* – they are not easy to spot. The next day on the AM tide, Josh found a total of 12 – I was saved from any further humiliation for I was busy photographing living *T. bednalli*! I digress though, back to the beginning.



**Aerial photograph of the beautiful coastline on our Cessna flight from Broome. The area is characterized by mangrove swamps, white beaches and rugged cliffs.**



**Aerial photograph of a likely island habitat for Bednall's murex. Notice the cliffs, ledges, and reef platform – all of which are exposed during the giant tides of spring and fall.**

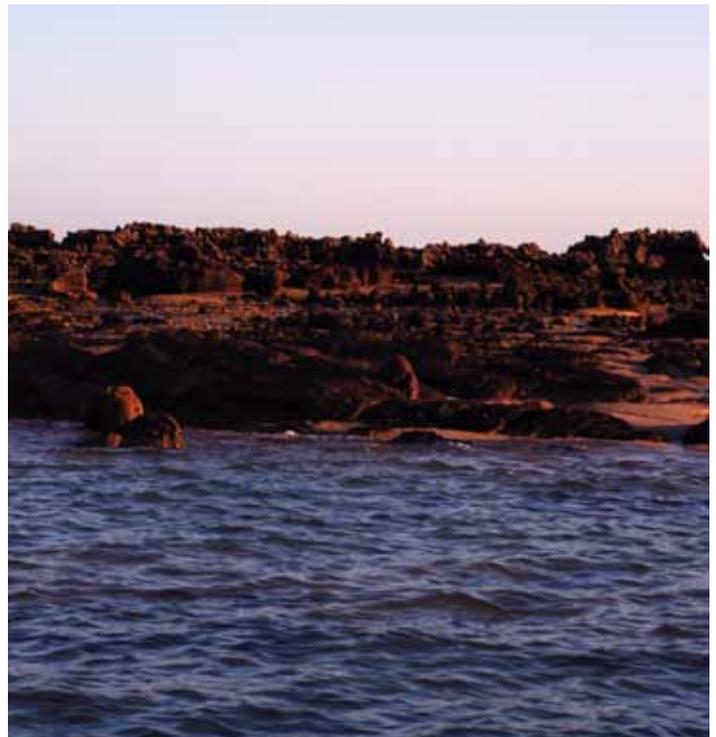
Western Australia is known for its enormous tidal fluctuations, and Broome, is no exception. These tidal fluctuations occur during the spring and fall seasons and can vary by almost 35 feet from minus tide to high tide – over 12 meters. At the low water mark, in Broome, a vast expanse of mud and sand bars is exposed. From these emerge a plethora of sand dwelling species including volutes.



Above and below: *Amoria damonii* in situ. This has always been a shell I thought particularly good looking, but add the animal and it is really striking! [ed. note: see the back cover for a magnified view of this volute].



Wreck of one of the flying boats of Broome. These are exposed during the extreme low tides of spring and fall. Past them, further to sea, is a sandbar that yielded *Amoria damonii*, amongst other species.



This is Bednall's murex habitat. Both above water, exposed at extreme low tide, and under the water, these volcanic ledges may yield beautiful "Butterfly shells" within their folds.

In addition, at extreme low tides, the wreckage of several flying boats emerges. These are vintage WWII planes downed by the Japanese. When these wrecks are exposed, the volutes come out to play.

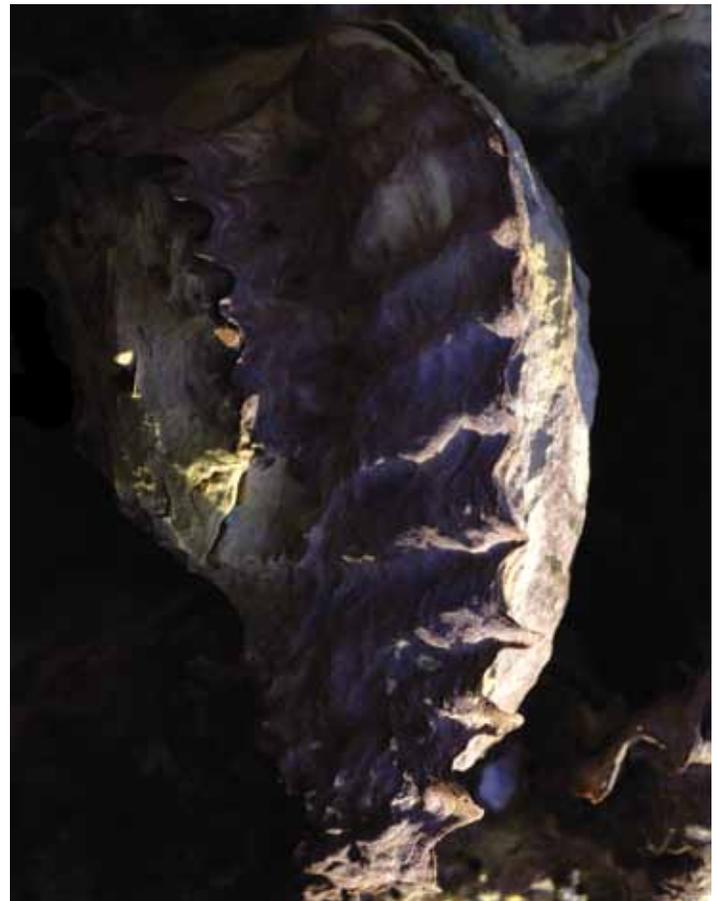
We struggled to sleep that first night in Broome, knowing that we would need to begin our trek behind the low tide waters at 4:30 AM. We awakened at 4 AM and accompanied by Josh, we began the approximate mile and a half trek to the water's edge. We plodded through sand bars, ankle deep mud, and more firm sand, punctuated by swiftly moving rivulets of tidal flow. We continued to walk into a glorious sunrise when finally the wrecks of the flying boats came into view. Then, miraculously, the volutes began to appear. Not one, not two, not ten, but dozens of *Amoria damonii* (Gray, 1864). Caught up in photographing them I ignored the other tuns, olives, murex, and giant Australian trumpet shells emerging all around us. Lynn and Josh did not; they collected specimens of a multitude of species, including a beautiful Australian trumpet, *Syrinx aruanus* (Linnaeus, 1758). At that point the tide began racing in and we headed towards the distant shore. At one point, there was some discussion of discarding the 20 pound shell, but Lynn persevered. The trumpet made it back safely. Now, we were headed north to Bednall's country.

The Kimberley region is desolate, nothing but scrub and red earth for miles and miles. It appears even more des-

olate from 5,000 feet inside a small Cessna (our transport up to One Arm Point). This is Bednall's country and we landed in Aborigine land on Monday afternoon. We drove to our tents (only about 120°F inside), unloaded our equipment and immediately headed back to board our boat. Josh, being the consummate professional guide, had arranged for his friend to meet us. We were off to explore the ledges that constitute Bednall's habitat during the extreme low tides of fall. I have never, ever, experienced a boat ride like that one on Monday evening. The tide was turning, the current was at least 16 knots and at one point the boat was caught in a whirlpool and was traveling sideways. The passage looked like a devil's cauldron. I saw at least one standing wave of 8 feet or more. You ask – was it worth it? Yes indeed, on that very first evening we found Bednall's murex! It took me only two slabs to find a juvenile. I left it in the hopes of supplementing the breeding population. We explored Bednall's habitat over the next several tide exchanges. Suffice it to say that we found quite a number. In addition, I was able to photograph the living animal. Interestingly it is a pale yellowish-white with small brown spots. These exploits were detailed earlier in this paper, I just need to emphasize that without Josh Akerman all our efforts would have been in vain!

During our last night at One Arm Point, due to circumstances beyond our control, we found ourselves without a boat. What to do? Let's go cross a crocodile-infested mangrove swamp and tidal inlet searching for *Chicoreus cornucervi* (Roding, 1798)! *C. cornucervi* is one of my favorite shells so I was totally excited. When Josh said: "Let's form a daisy chain by holding hands to cross this inlet." I was a bit perplexed. Hmmm. The current wasn't unmanageable, about 4 knots; the depth was only up to our waist, but when Josh said: "Just letting you know, large crocodiles have been known to frequent these waters." I became somewhat apprehensive. I figured that the daisy chain would provide a meal for the crocodiles, as in the slowest person! On the other hand, as soon as we crossed the tidal flow, I found my first *C. cornucervi*; then another and then tens and then hundreds. They were laying eggs in the *Halimeda* algae. A murex lover's dream. OK, so the mud was ankle to knee deep and the fear of crocodiles was ever present, the shells were still *C. cornucervi*. We had our pick from hundreds. I also saw blue-ring octopus, an unnamed red octopus, plus *Melo amphora* and multiple other shell species. To put it in perspective, my largest *C. cornucervi* was approximately 130mm and pure black. The next day we flew back to Broome.

Before we make our way back to Broome, just a brief aside as to the morphology of Bednall's Murex. Why the wings? What is the purpose of these magnificent frills? Observing them in their native habitat, several hypotheses spring to mind. First and foremost, they provide hydrodynamic function and stability to the shell during those times of great current flow vis-à-vis the huge daily tidal fluctuations. Sec-



Thousands of these oysters line the rocks in the murex's habitat. One theory is that Bednall's murex has developed their "wings" to mimic the oysters. Another is that their "wings" provide hydrodynamic fluidity so that they can withstand the water pressure generated by the huge tidal exchanges.



*Acanthopleura spinosa* (Bruguère, 1792), an unusual chiton species found in conjunction with Bednall's murex.



*Melo amphora* calmly cruises the rocks along the cliff face.



*Chicoreus cornucervi* in dire need of cleaning, but even covered in mud this is a great looking shell.



A highly sought after cowrie color form – the Broome blue. *Erronea erronea* f. *azurea* (Schilder, 1968).



A pair of Bednall's murex in their native habitat.

ond, they provide a form of mimicry vis-à-vis the thousands of frilly oyster shells found in their native habitat. From a hydrodynamic outlook, these frills would direct and funnel the water flowing across the shell in such a way that they are not displaced from the secure rocky perches. Typically, they are located under volcanic rocky ledges from 3 to 30 feet deep. The frills would funnel the water in such a way that they could remain secure in their rocky habitat. In addition, if they somehow become covered in sand, these frills would provide sufficient surface area such that they could quickly climb out

of the suffocating sand. With regard to the second theory, murex eat bivalves. These frills on the Bednall's species imitate the oysters found all around them. Could this be a means of camouflage as they slowly approach their oyster dinner? Or do both the oyster and the Bednall's murex use the same morphological adaptation to their advantage during the massive tidal fluctuations? From a realistic viewpoint, both hypotheses are probably moot since both are partially true. Regardless, the frills provide the beauty of the murex. The function is secondary to the conchologists who want one for their collection. That being said, to be truthful, the vast majority of Bednall's murex have an imperfect frill at least on one side! My theory is that it demonstrates the violence of the tidal exchange and current!

We flew the same small Cessna from One Armed Point into Broome. Taking off from that red dirt runway was just as exciting as landing on it! Once back in Broome, we concentrated on finding several species that had eluded us over the last several days: *Melo amphora* (Lightfoot, 1786), *Hexaplex stainforthi* (Reeve, 1843), *Chicoreus rubiginosus* (Reeve, 1845), and cones – especially *Conus victoriae* (Reeve, 1843). I was also concentrating on photographing the living animals of all these species. Over the next several days and nights we were able to find, and I was able to photograph, almost all the species we had on the list. I was especially lucky to find and photograph a Broome blue cowrie (well, thanks goes to Josh for that one) as well as the *Melo*. I was also able to find and photograph the orange version of *Chicoreus rubiginosus*. In addition to the orange/golden form I was successful in finding chocolate, white, pink, and almost black color forms. *Hexaplex stainforthi* was no longer elusive and on our last night *Conus victoriae* was abundant in the small tidal pools left by the massive low tide. There were thousands of small tidal pools containing melos, tiger cowries, and other species. More importantly, almost each one held a *C. victoriae*. The color forms ranged from the typical tented pattern to melanistic to pale with pink stripes. All of us were happy after that evening, even though we did bog down in the dunes afterwards!

So, how do we conclude this article? First, kudos to Josh Akerman. If you dream of finding Bednall's murex, fly to Broome and hire him. If you want the best specimens of them, call, email, or Facebook him; he has remarkable skills



Photograph of a living *Timbellus bednalli* (Brazier, 1878) animal.

and a remarkable collection. The land of the tides did not disappoint. I was hoping for a few more species of volutes, but the ones I found were exceptional. Being a devout murex enthusiast, I was thrilled to find all the murex species. I was overwhelmed by the *C. cornucervi* and thoroughly enjoyed watching them lay eggs. The shells, once cleaned, are amazing. Of course, one of my Holy Grails was a living Bednall's murex. I was enthralled to find them in their native habitat and to have the animal emerge for photographs. For the experience of a lifetime, travel to Broome and the Kimberley. You won't be disappointed!

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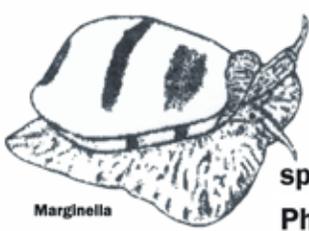
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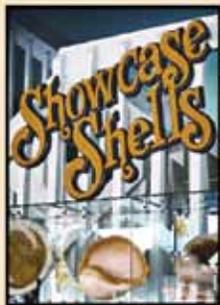
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# SCUM XIX: Southern California Unified Malacologists

Lindsey T. Groves



## Attendees at SCUM XX

**Top row:** (l to r): John Alderson, Mary Stecheson, Hessam Ghanimi, Jaymes Awbrey, Craig Hoover, Chris Everett, Emile Fiesler, Phil Liff-Grieff, Debbie Kunath, Keith Thompson, Britt Leatham, Kim Coombs, Kyle Sirovy, Newton Hood, Shawn Wiedrick, Doug Eernisse.

**2<sup>nd</sup> row:** (l to r): Anna Dutra Clark, Pat Don Vito, Bob Abela, Austin & Jo Hendy, Sabrina Medrano, Jenny McCarthy, Haleh Golestani, Clara Jo King, Chuck Powell, Ángel Valdés, Lance Gilbertson, Eric Ostrowski, Joshua Rodriquez, Bryan White.

**3<sup>rd</sup> row:** (l to r): Carole Hertz, Jules Hertz, Jann & Nadia Vendetti, Jere Lipps, Sarah Siren, Bob Stanton, Hans Bertsch, Lawrence Moser, George Kennedy, Lindsey Groves.

**Bottom row:** (l to r): Carol Stadum, Scott Rugh.

Present at SCUM XX but not in photo: Dave Goodward, Zach Lefevre

The 20<sup>th</sup> annual gathering of Southern California Unified Malacologists (SCUM) was held at the Laguna Hills Community Center, Laguna Hills, CA, for the second consecutive year and was attended by 44 professional, amateur, and student malacologists and paleontologists on Saturday, January 30<sup>th</sup>, 2016. This informal group continues to meet on an annual basis to facilitate contact and keep attendees informed of research activities and opportunities. As always, in keeping these gatherings informal, there are no dues, officers, or publications. The continuing success of informal groups such as SCUM, Mid-Atlantic Malacologists (MAM),

Ohio Valley Unified Malacologists (OVUM), and FUM (Florida Unified Malacologists) will hopefully encourage more regional groups of malacologists and paleontologists to meet in a likewise manner.

SCUM XX host Sarah Siren greeted pre-meeting attendees with a variety of pastries, fresh fruit, coffee, tea, and juices. Around 9:00 AM Sarah welcomed the group and made several announcements. As this was the twentieth gathering of SCUM, charter members in attendance were acknowledged including, Hans Bertsch, Pat Don Vito, Lindsey Groves, Carole & Jules Hertz, and George Kennedy.

In continuing SCUM tradition all present were given the opportunity to introduce themselves and give a short update about current mollusk related activities. Most presentations were informal but ten attendees gave more detailed talks. Fourteen students from three universities were in attendance; seven mentored by Doug Eernisse (CSUF): six by Ángel Valdés (CPP): and one by Patrick Krug (CSULA). Student attendees Haleah Golestani (*Aplysia*), Sabrina Medrano (Sacoglossans), Jenny McCarthy (Juliidae), and Craig Hoover (*Doriopsilla*) presented informative talks. There was also an update by Lindsey Groves on the progress made on Jim McLean's northeast Pacific shelled-gastropod identification guide since SCUM XIX. Numerous SCUM have volunteered to write chapters for the tome including Ángel Valdés (shelled opisthobranchs), Pat LaFollette (Pyramidellidae), Daniel Gieger (Vetigastropoda), Doug Eernisse (Hipponicidae, Capulidae, Siphonariidae, and Patellogastropoda), Jann Vendetti (Buccinidae with Roger Clark), Shawn Wiedrick (*Ocinebrina*), and Lindsey Groves (Cypraeoidea and Velutinidae).

Other talks of particular interest included a presentation by biological consultant Emile Fiesler (BioVeda) who summarized the biogeography of the introduced freshwater gastropod *Melanooides tuberculata* (Müller, 1774) since its introduction into southern California in 1972 in Riverside County and since collected in Laguna Niguel, Orange County, Palos Verdes Peninsula and Lincoln Park, both Los Angeles County. This species, which outcompetes native species for food and space, is native to North Africa and Southeast Asia. He also noted that he collected several specimens of unknown *Pomacea* from the Palos Verdes Hills. Shawn Wiedrick summarized his molluscan endeavors since SCUM XVIII including his current research on the gastropod muricid genus *Ocinebrina* in California and micro-turrid genera and species of the tropical Indo-Pacific. New NHMLAC Invertebrate Paleontology collection manager Austin Hendy presented a short talk on the recent changes in the section since Mary Stecheson's retirement and his plans for the future of LACMIP. Jere Lipps (Cooper Center director) made an impressive presentation about the progress made to improve the John D. Cooper Archaeological and Paleontological Center as the premier repository for specimens and artifacts in Orange County. Once again Doug Eernisse (CSUF) reported on the myriad of projects he has in progress singly and with co-authors both professional and student.

SCUM XXI will be hosted by Doug Eernisse at the Cooper Center, CA, in January of 2017.

#### SCUM XX participants and their respective interests and/or activities:

**Bob Abela** (San Diego Shell Club): Formerly a volunteer at the museum with Carole and Jules Hertz, has recently relocated to Guam.

**John Alderson** (Nat. Hist. Mus. L.A. Co., Invert. Paleo.): Research Associate currently working on invertebrates of the Miocene Conejo Volcanics with Bob Stanton. Also revising

the Pectinidae section of a review of the Miocene fauna of the Topanga Formation of southern California.

**Jaymes Awbrey** (Calif. St. Univ., Los Angeles): Recently graduated and continues research on sacoglossan sea-slugs.

**Hans Bertsch** (San Diego Shell Club): Continues with research on Hawaiian, Californian, and Sea of Cortez nudibranchs.

**Anna Dutra Clark** (Los Angeles, CA): Recently relocated to southern California and has an interest in land snails.

**Kim Coombs** (Calif. St. Univ., Fullerton): Graduate student in Doug Eernisse's lab.

**Pat Don Vito** (San Diego Nat. Hist. Mus.): Volunteer at the museum in the Invertebrate Paleontology section. She also brought in a large Cretaceous gastropod with oysters and *Spondylus* attached for identification ... possibly a fasciolariid or volutid.

**Doug Eernisse** (Calif. St. Univ., Fullerton): Currently has a myriad of chiton research projects including *Cyanoplax* as a free spawner vs. a brooder, *Chaetopleura* and first report of the genus as a brooder, *Chitonina* and mitochondrial DNA sequences, chitons and limpets from Japanese docks set adrift by tsunamis in 2011, and new species of *Ferreirella* from off Big Sur, CA. He also co-led a chiton workshop in Coquimbo, Chile, with Russian colleague Boris Sirenko. All of this in addition to teaching duties.

**Chris Everett** (San Diego Nat. Hist. Mus.): Fossil preparator for the paleontology department.

**Emile Fiesler** (Bio Veyda): Conducts biological surveys with an emphasis on Mollusks and Arthropods. Made presentation on the introduced freshwater gastropod species *Melanooides tuberculata* and an unknown species of *Pomacea* in southern California.

**Hessam Ghanimi** (Cal. Poly Pomona): Graduate student researching the pleurobranch genus *Berthella* and its phylogeny.

**Lance Gilbertson** (Newport Beach, CA): NHMLAC Malacology Associate researching land snails with Doug Eernisse.

**Haleah Golestani** (Cal. Poly. Pomona): Undergrad researching several species of *Aplysia* using mitochondrial and molecular gene sequencing.

**Dave Goodward** (Grand Terrace, CA): Research interest in the landsnail genus *Helminthoglypta* with Lance Gilbertson.

**Lindsey Groves** (Nat. Hist. Mus. L.A. Co., Malacology): Continues as collection manager at NHMLAC. Research interest in fossil and Recent cypraeoideans and their biogeography and biostratigraphy. Currently working with Daniel Muhs (USGS Denver) on Pleistocene marine terrace chronology and sea-level changes on the California Channel Islands and with Richard Squires (CSUN, retired) on the fossil invertebrate taxa of paleontologist William More Gabb.

Writing Cypraeoidea and Velutinoidea chapters for Jim McLean's NE Pacific monograph.

**Austin Hendy** (Nat. Hist. Mus. LA Co., Invert. Paleo.): Collection Manager of Invertebrate Paleontology at NHMLAC with an interest in fossil mollusks from Panama and northern South America and their taxonomy and biogeography. Also researching the Pleistocene formations of the Palos Verdes Peninsula, California.

**Carole Hertz** (San Diego Nat. Hist. Mus.): Volunteers at the museum in the Invertebrate Section and is currently working on the type collection. Long-time editor of the San Diego Shell Club publication *The Festivus* ... now retired.

**Jules Hertz** (San Diego Shell Club): Retired business manager of *The Festivus*.

**Newton Hood** (Cal. St. Univ., Fullerton): Graduate student with Doug Eernisse.

**Craig Hoover** (Cal. Poly Pomona): Recent graduate. Researching pseudocryptic diversity in *Doriopsilla* species complex in California and Baja California, Mexico.

**George Kennedy** (Brain F. Smith & Associates): Conducts environmental monitoring in San Diego County, particularly Pleistocene and Eocene aged strata.

**Clara Jo King** (Cal. Poly. Pomona): Grad student researching *Phidiana hiltoni*.

**Debbie Kunath** (Cal. Poly Pomona): Grad student in Geological Sciences, a consulting geologist, and shell collector.

**Britt Leatham** (Cal. St. Univ., San Bernardino): Interest in Recent and fossil gastropods.

**Zach Lefevre** (Dudek, Encinitas, CA): Works with Sarah Siren at Dudek. Honorary SCUM member.

**Phil Liff-Grieff** (Pac. Conch. Club): Collector of landsnails with an interest in island biogeography. Frequent iNaturalist participant particularly with landsnails.

**Jere Lipps** (Cooper Center): Recently re-retired from directorship of the Cooper Center. Presented a summary of many of the projects and objectives of the center with regard to Orange County fossils and anthropological artifacts.

**Jenny McCarthy** (Cal. Poly. Pomona): Graduate student, currently researching the sacoglossan family Juliidae

**Sabrina Medrano** (Cal. Poly. Pomona): Graduate student, currently researching shelled sacoglossans Oxynoidae and non-shelled sacoglossans of the family Pleurobranchidae.

**Lawrence Moser** (Pac. Conch. Club): Current club Vice-President. Interested in all mollusks.

**Eric Ostrowski** (Cal. St. Univ., Fullerton): Graduate student with Doug Eernisse.

**Chuck Powell, II** (U.S. Geological Survey): Now retired from the USGS and continues to research Neogene mollusks from Alaska to the Gulf of California. Has particular interest

in the Imperial (Miocene/Pliocene), San Diego (Pliocene), Purisima (Miocene), Niguel (Pliocene), and Santa Barbara (Pleistocene) formations.

**Joshua Rodriguez** (Cal. St. Univ., Fullerton): Graduate student researching limpets with Doug Eernisse.

**Scott Rugh** (Temecula, CA): Paleo consultant and currently preparing a manuscript on the paleontology of the late Pliocene San Diego Formation.

**Sarah Siren** (Dudek, Encinitas, CA): Successor to Carol Stadum at the Laguna Hills Community Center. Conducts paleontologic consulting for Dudek.

**Kyle Sirovy** (Cal. St. Univ., Fullerton): Graduate student researching chitons with Doug Eernisse.

**Carol Stadum** (Carlsbad, CA): Former paleontologist at the Laguna Hills Community Center who created the current exhibits. Continues to research Miocene mollusks of the Orange County area.

**Robert Stanton** (Nat. Hist. Mus. L.A. Co., Invert. Paleo.): Research Associate currently working on invertebrates of the Miocene Conejo Volcanics with John Alderson.

**Mary Stecheson** (Cooper Center): Volunteers at the Cooper Center.

**Keith Thompson** (Beaumont, CA): Retired with a research interest in freshwater gastropods.

**Ángel Valdés** (Cal. Poly. Pomona): Teaches Evolutionary Biology and continues phylogenetic research on opisthobranch gastropods of the Caribbean and Panamic provinces.

**Jann Vendetti** (Nat. Hist. Mus. LA Co., Malacology): Twila Bratcher Chair in Malacological Research at NHMLAC. Researching sacoglossans and land snails and slugs as part of SLIME (Snails and slugs Living In Metropolitan Environments) for the Urban Nature Research Center at NHMLAC. Current Western Society of Malacologists President preparing for 2017 meeting in Los Angeles. Daughter Nadia is the youngest SCUM attendee (see group photo).

**Bryan White** (Calif. St. Univ., Fullerton): Graduate student with Doug Eernisse.

**Shawn Wiedrick** (Calif St. Univ., Fullerton): Current President of the Pacific Conchological Club and interested in all areas of shell collecting. Published two papers in the new *Festivus* on Indo-Pacific micro turrids. Shawn has also returned to grad school and is attending California State University, Fullerton, to study ocinebrine gastropods for a Master's degree.

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Malacology Section  
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# The Nylander Museum - Caribou, Maine

Sheila L. Nugent



**The Nylander Museum, Caribou, Maine.**

Despite having collected freshwater mollusks for many years in the rivers and lakes of Maine, I had never made it to Maine's largest and northernmost county, Aroostook. While researching my collections, I began to notice articles in *The Nautilus* referring to freshwater species from northern Maine by a naturalist named Olof O. Nylander. My interest began to focus on the man and I found out that there was a museum in Caribou devoted to him and his collections. Caribou is not on the way to anywhere except Fort Kent and Canada, and easily a seven hour drive from southern Maine, but a trip to Caribou was long overdue and the museum was calling.

I planned my trip north over a weekend because the museum is only open from 1-3 on Saturday and Sunday. To insure that I would not miss the window of visitation, I left a phone message indicating my planned trip. To my surprise I received a quick call back from a Mr. Nelson Ketch regarding my visit. I soon learned that Olof Nylander was his great grandfather and that he had recently been asked to serve on the governing board of the museum. I was interested in seeing the collection of Lymnaeidae snails from the Fish River system and Mr. Ketch assured me that I would have access to this collection.

So the trip began on a Saturday morning. I spent the day driving and stopping on the way at a few lakes to do some collecting. Since it was August and still warm, I planned on camping in Presque Isle, a small city nearby Caribou. Arriving around 3:00 PM, I set up camp overlooking the Aroostook River and to my delight, caught the last day of the "Crown of Maine Balloon Festival" and was treated



**A large bronze caribou, namesake for the city Caribou, Maine.**

to a sunset aerial display of hot air balloons. On Sunday morning I decided to explore before going on to Caribou. The Aroostook State Park was nearby and a visit to the oldest state park in the country was a great way to begin my day. I was able to collect some specimens of mussels, snails and pisidium clams in nearby Echo Lake outside the park confines, and visited several small ponds and streams on my way to Caribou.

The whole time I was driving and preparing for my museum visit, I kept wondering what more I could find out about Mr. Nylander. I had read a few things online, and I knew that he was a Swedish immigrant who had a keen eye and interest in the natural world. He had been a child who would bring sea shells back to his home as play things. He was an explorer of the nearby forests and fields, finding land snails and unusual rocks and minerals to collect. As a youth he spent time in the museums of Stockholm, studying their natural history collections, before following his brothers to

The United States. Having apprenticed as a painter in Sweden he continued this vocation in America, spending time in Boston, Rhode Island, New York, and Florida. In the winters he became friends with professors at 'The School of Technology,' 'Harvard College,' and 'Yale College,' where he spent his spare time studying their collections. There were no funds for a formal education, so he taught himself. This is also when he began traveling to Maine and the Caribou region, collecting fossils and mapping geological outcroppings. For a time he worked for The US Geological Survey as a field collector. Settling in Woodland, Maine, he and his wife raised 2 children. It was said by family members that they remember Olof taking his walking stick and heading out into the woods to explore. He spent time with friends and colleagues canoeing and collecting snails, fossils, and plants in the Fish River and its chain of lakes. He was an expert on the Devonian fossils of Maine and Maine's wild orchids.

I arrived early at the corner of Main and Nylander streets in front of a modest white clapboard building, which houses the Nylander Museum. Mr. Ketch was early as well. I received a warm welcome and knew right away this was more than a visit to a museum, this was a personal tour into a man's life and passions seen through the eyes of his great grandson.

We started with a tour of the current museum offerings that are on public display and were overseen by a wax figure of Olof Nylander at his desk who kept constant vigil by the front entrance. There are two rooms of exhibits, the north and south galleries. The south houses the extensive mineral and fossil exhibits as well as some marine mollusks. The north side has a blend of Native American artifacts, mounted animals, and butterflies, some having been donated to the museum. In this room there are also several cases of early mollusk collections mounted on cardboard, which were the displays that Mr. Nylander used as teaching tools when visiting local schools. A case of Cuban land snails stands out, obtained through a trade with Dr. Miguel L. Jaume of Havana, with a hand written letter to Olof dated 1933. A case of world-wide land snails is also quite impressive. Information on native orchids that were also studied and written about by Mr. Nylander can also be found here. Between the two rooms are books and copies of Nylander's papers available to the public.

After viewing the main floor, I got to go behind the scenes to the enormous amount of material stored in the basement. To see original hand written labels on specimens collected in the early 1900's was an honor. This is the real heart of the museum. Being given the chance to see the Lymnaeidae that were collected from nearby streams and lakes was what I had come for and to get such a sense of whom Olof Nylander really was. I was amazed that this man had collected so extensively and hope that these additional items



**I camped along the picturesque Aroostook River.**



**Sunset display of hot air balloons from the last day of the "Crown of Maine Balloon Festival."**



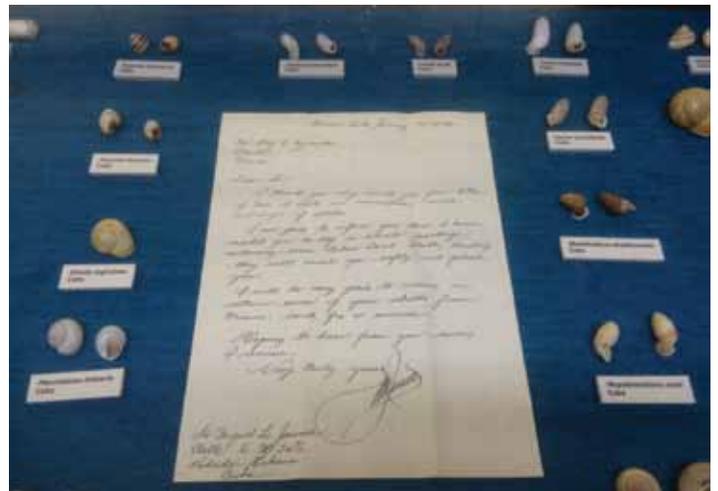
Olof Nylander (1864-1943) and a few fossil specimens he collected.



The north gallery.



The south gallery.



Cuban land snails with the letter from Dr. Jaume.



A tray of assorted landsnails.



Some of Nylander's teaching aids.

will become future exhibits. Over the years he shared his findings with other scientists whose friendships he gleaned as a young man in Boston and New York. He was also able to trade for new specimens to add to his collection. There are boxes and cabinets full of paper archives in storage as well. Everywhere you look there are artifacts, shells, rocks, fossils, and cabinets full of fresh and marine shells awaiting their debut in the museum proper.

The timing of my visit was perfect as there have been recent changes. The current building was built in 1938 under the Works Progress Administration. In 1939 the Museum was dedicated and the collections that had previously been stored in the Caribou High School where Nylander had a work room, were moved into the museum. Mr. Nylander served as the first curator until his death in 1943. His collections had been donated to the City of Caribou and upon his death the city took over as curator of the museum, which was a department within the city government. Although the collections remained in the current building, over the years the space was shared with the city as a recreation hall, a USO, and most recently the Chamber of Commerce. Now that the Chamber of Commerce has become regionalized, the whole building is dedicated to the Nylander collections.

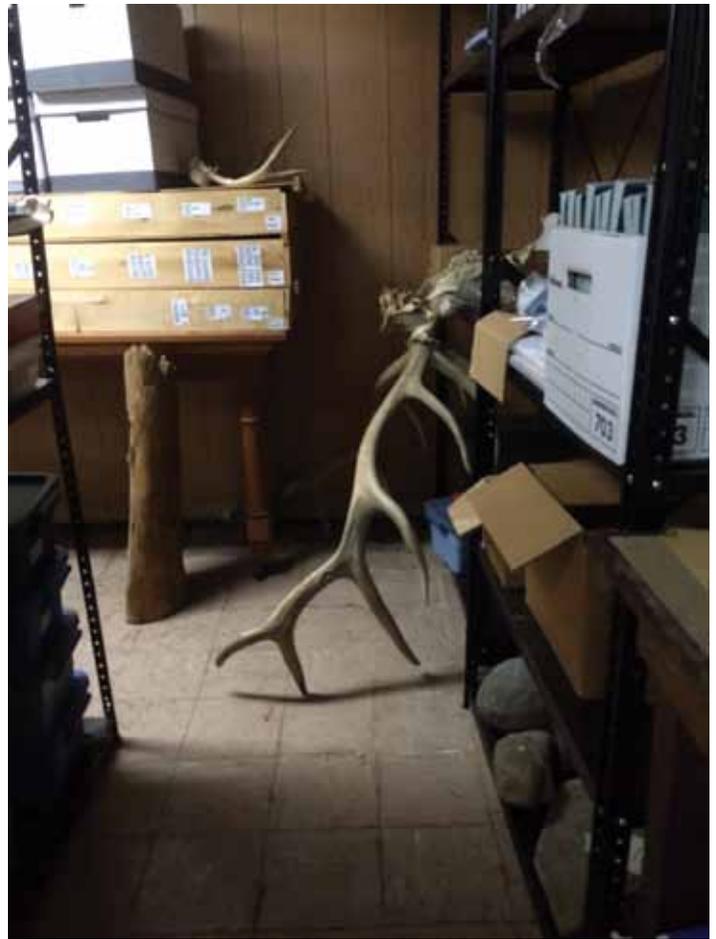
With new space and new enthusiasm, the Museum Board has room to bring more exhibits up from the basement storage area and build additional matching cabinets. There is also a plan to categorize the collections with a museum computer program. They have lots of work ahead of them. Time was running out for my visit but I still had lots more to see, so I accepted Mr. Ketch's offer to return on Monday for more exploring and also to meet with the Board President, Mr. Kimber Noyes.

I left the Museum with 3 hours of sunlight remaining and decided to head north from Caribou to Madawaska Lake and Cross Lake, two lakes mentioned in Olof Nylander's papers. The access to Madawaska was a modern boat ramp with rocky fill. I found nothing. The access to Cross Lake was two miles down a dirt road to a ramp area where I was able to find dead examples of *Elliptio complanata* and *Pyganodon cataracta*, also some snails that I have not yet identified. Access to lakes is much different today than in the 1800s, there are private property concerns to deal with and few public access points. Traveling back to the campground, two large moose ran across the road, but I was driving and couldn't get a picture. I was just glad they didn't run into me.

On Monday I returned to the museum and met with Mr. Noyes, who was as enthusiastic about the new direction of the museum as was Mr. Ketch. We talked about the current exhibits and I actually made a few suggestions and offered help if needed. I finished getting the information I had come for and then took a tour of the countryside with Mr. Ketch. We went by the Caribou stream and



**A wax figure of Olof Nylander (sitting). Nelson Ketch is behind Nylander in the dark t-shirt and Nylander Museum Board President, Kimber Noyes is on the right.**



**Basement storage of collection items that just do not fit into the display area.**



Original notations by Nylander on locally collected fresh-water snails.



Access to Nylander's original collecting sites was often restricted by private property and limited road access.

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**Nylander, Olof O. 1901.** *Limnaea emarginata*, Say and the Var. *mighelsi*, Binney in *Fish River*.

**Nylander, Olof O. 1902.** *The Original Locality of Limnaea Ampla, Mighels*. *The Nautilus* 15(11):127-129.

Collins Pond, two of Olof's favorite collection sites. Recent rains had swelled the stream so it was difficult to get access for collecting. We visited the Woodland site of Nylander's home with beautiful fields of wildflowers and a huge cottonwood tree planted by Olof himself. His home is no longer standing, but the family retains ownership of the property. A visit to his nearby grave to pay respect was humbling. We spent several more hours driving to some of the lakes that had been surveyed by Nylander. A few specimens of fresh-water mussels were obtained at Lake Matawaska and I do believe Nelson Ketch enjoyed looking for shells.

All In all it was a very pleasant and informative afternoon. I said goodbye and made my way back to camp with increased knowledge and insight into the life of Olof O. Nylander. Many museums are just collections of things. Here in Caribou is the story of a man and his passion for nature. I would spend the trip home doing further collecting and knowing that I had made new friends in Caribou and that I would return..

Olof O. Nylander worked with notable scientists of the time, including Professor H. A. Pilsbry, Professor P. F. Baker, Professor Edward L. Morse, Mr. Alexander Longfellow, Dr. Bryant Walker, Dr. V. Sterki, Paleontologists H. S. Williams, John M. Clarke, and more. Prior to his death, The University of Maine bestowed upon him an honorary Master of Science Degree for his accomplishments and contributions to the natural history of northern Maine.

Several fossil species and snails have been named for him, including:

*Phacopidella nylanderi* (Clarke 1907) [Devonian trilobite]  
*Proreusselaeria nylanderi* Raymond, 1923 [Upper Silurian-Middle Devonian brachiopod]

*Macroporaster nylanderi* Raymond, 1921 [Devonian sea star]

*Pisidium pauperculum nylanderi* Sterki, 1898 [freshwater Sphaeriidae]

*Vertigo nylanderi* Sterki, 1909 [landsnail]

*Valvata sincera nylanderi* Dall, 1905 [freshwater snail]

**Nylander, Olof O. 1937.** *A reconnaissance of the Head Waters of Fish River. Aroostook County, Maine*. Caribou, Maine, May.

**Nylander, Olof O. 1941.** *Sketch of my life up to my seventy-seventh birthday*. Caribou, Maine, June.

**Nylander, Olof O. 1943.** *The Lymnaeidae of Northern Maine and Adjacent Canadian Provinces and notes on Anson Adams and his Collection*. University Press, Orono, Maine.

[www.cariboumaine.org](http://www.cariboumaine.org)  
[www.mainememory.net](http://www.mainememory.net)

## COA *Neptunea* Award

Many of us are beginning plans for the 2017 COA Convention in Key West, FL. One of the many events on the agenda is the annual COA *Neptunea* Award(s), and it is my privilege to call for nominations.

The consensus of the COA Board is to reopen nominations with a “clean slate” annually. **Nominees not selected in previous years are certainly welcome for consideration if re-nominated – in fact their re-nomination is encouraged.** For the present cycle, nominations will close on June 1, 2017, so as to allow ample time for deliberation before the convention.

By way of background, the *Neptunea* Award (Brunner, 2000; Lipe, 2000) was established at the midyear (1999-2000) meeting of the COA Board in order to recognize outstanding and distinguished service to conchologists and malacologists in recognition of:

1. Service to the Conchologists of America.

AND/OR

2. Service to the scientific interests of Conchologists of America.

AND/OR

3. Service to the science of Malacology as it applies to conchologists anywhere. Although notable exceptions have been made, the COA Board, which serves as the jury for the *Neptunea* Award, has traditionally weighed its consideration for award recipients toward (1) amateurs: those not currently pursuing a principal career involving collection, study, or commerce of mollusks, (2) individuals “working behind the scenes” and relatively unrecognized in the COA world, for their contributions, and (3) active members of the COA. Up to three awards have been made at our annual conventions beginning with the Houston event in 2000 (see below). Nominations for the *Neptunea* Award may be made by any COA member, and the format is simple:

Name of nominee:

This person deserves this award because (here a somewhat detailed paragraph will suffice.)

..... Signed .....

and either snailmail or email that nomination to the COA *Neptunea* Award Coordinator:

Everett Long  
422 Shoreline Dr.  
Cedar Point, N.C. 28584-7204  
nlong3@earthlink.net

Previous *Neptunea* Award winners:

2000 (Houston, TX): Ross Gunderson, Ben and Josy Wiener, Debbie Wills  
2001 (Port Canaveral, FL): Emilio Garcia, Harry Lee, Lynn Scheu  
2002 (Sarasota, FL): Richard Petit, Bernard and Phyllis Pipher  
2003 (Tacoma, WA) Jim and Linda Brunner, Kevin Lamprell, Doris Underwood  
2004 (Tampa, FL): Bobbi Houchin  
2005 (Punta Rassa, FL): Richard Forbush, Anne Joffe, William Lyons  
2006 (Mobile, AL): Jack Lightbourn, Betty Lipe  
2007 (Portland, OR): none given  
2008 (San Antonio, TX): Bill Frank, Archie Jones  
2009 (Clearwater, FL) none given  
2010 (Boston, MA): none given  
2011 (Port Canaveral, FL): Alan Gettleman  
2012 (Cherry Hill, NJ): Gary Rosenberg, Martin Avery Snyder  
2013 (Sarasota, FL): David and Lucille Green, Marlo Krisberg, Charles Rawlings  
2014 (Wilmington, NC): Colin Redfern, Tom Rice  
2015 (Weston, FL) John and Cheryl Jacobs, Kevan and Linda Sunderland  
2016 (Chicago, IL) Rich Goldberg, Homer Rhode, Charlotte Thorpe

Brunner, L., 2000. The *Neptunea* Award. *American Conchologist* 28(3): 3. Sept.

Lipe, B[etty], 2000. Presidents Message. *American Conchologist* 28(4): 2. Dec.

## In memoriam:

Eloise Boynton Bosch

Deborah Freeman

Ken Matthys

(William) Henry McCullagh, Jr.

James H. McLean

Doreen Prugel

Peggy Wilkerson

Freda Willis



Donald & Eloise Bosch

**Eloise Bosch** lived her retirement years in her beloved Oman with her late husband, Dr. Donald Bosch, who always said the prettiest shell (*Punctateon eloiseae* (Abbott, 1973)) was named after

the prettiest lady he knew. She spent her working life in Oman as a teacher at the Al Amana Mission School in Muscat, teaching in both Arabic and English.

Eloise was born in Mohawk, New York, on August 4, 1919, and was the oldest of 4 children. She grew up in New York City and attended Hope College in Holland, Michigan. She graduated with a B.A. as a teacher. She was fortunate to become very close friends with her future sister-in-law who insisted that she had a wonderful brother that Eloise must meet. They ended up married for 70 happy, adventurous, loving years. During World War II, while Donald was in the US Army in Europe, Eloise graduated from Union Theological Seminary in New York City with a master's degree in religious education.

Eloise and Don arrived in Muscat, Oman, in January 1955 by British India Steam ship with their three small children, David, Paul and Bonnie. They came to the Middle-East as missionaries under the Reformed Church of America and had spent three years in Amara, Iraq, studying Arabic. They would continue their mission work until their retirement with Donald working as a doctor and Eloise as a teacher. Upon their retirement in 1983, His Majesty Sultan

Qaboos awarded them Omani nationality and provided them with a home in Haramel, in recognition of their many years of service to the people of Oman. They would subsequently spend half the year in the United States with family and friends and the other half in their much loved Oman.

Eloise was a gifted teacher and loved the children she taught. She once said that she was "...humbled to have played a small part in the lives of these children, as some have become bankers, principals in girls' schools, some are now in the Ministry of Education and the Ministry of Social services. Yet others have become artists and arrange art exhibits. Some boys and girls have been trained to be nurses and medical assistants. Yet others have served in the army and navy. Some married ambassadors and served in other countries and some became involved in local charities."

Both Eloise and Don became collectors of seashells as a result of the family's weekend visits to the local beaches, where they noticed the many shells on the shore. This began their love affair with the world of conchology. Donald would be recognized as an expert on seashells of the Arabian Gulf and authored several books on shells of that area - Eloise would be his helpmate and partner. The shell books included: *Seashells of Oman*, *Seashells of Southern Arabia*, and *Seashells of Eastern Arabia*. In 2000, Eloise and Donald co-authored a book about their early lives in Oman, *The Doctor and the Teacher, Oman 1955-1970*. Donald and Eloise, often with the help of their children and grandchildren, discovered over 20 new species of seashells in Omani waters. One of the most beautiful shells they discovered was later named *Punctateon eloiseae* after Eloise.



## Deborah Jane Freeman

was married 34 years to Glenn. She worked in an emergency room and neonatal ICU, later becoming a private detective with shotgun certification. In Virginia she built a log home on a mountain. In Englewood, Florida, Debbie expanded SW Great Dane Rescue and volunteered at Suncoast Humane Society. She mastered many crafts, including cake decorating



Debbie Freeman

(with many designs published), beekeeping and bee rescue, quilting, stained glass, and genealogy (published), as well as seashell art (including award winning sailors' valentines) and she judged several shell shows, but her passion was conchology. Debbie won awards for the study and display of deformed shells. She held two board positions with COA, was the only three term president of the Englewood Shell Club, and started their newsletter. When the COA Membership Director was forced to step down due to declining health, Debbie immediately volunteered. Her own declining health never affected her ever-present humor and enjoyable dry wit.

### Ken Matthys

loved teaching others about shells, whether they were young or old. He really loved giving shells to children and he thoroughly enjoyed sharing his shell



Joyce & Ken Matthys

collecting knowledge with participants attending the Road Scholar programs on Sanibel during the winter. It seemed only appropriate to place his cremated remains in one of his large Florida horse conchs for burial. Both Ken and Joyce have been extremely active in both local shell clubs and COA. Ken was quite knowledgeable about shells, yet was always able to listen attentively to others. An all-to-uncommon trait in folks who really know a subject.

### (William) Henry McCullagh Jr., MD FACC

By Harry G. Lee

Henry was my partner in medical practice and a fellow naturalist before then, a period spanning nearly half a century. While his passion for the naiads of the American southeast was unsurpassed, he was equally happy diving in the Florida Keys, plying the waters of Vancouver Sound aboard his *La Pescadora*, birding in South America, or landsnailing in the Smoky Mts. - almost always accompanied by his wife, Lenore, who shared his love of the outdoors.

After graduating first in his class from Emory University Medical School, he continued his training at Grady Memorial Hospital in Atlanta, GA, where I first made his acquaintance. He polished his enviable comprehension of cardiology under the tutelage of Drs. J. Willis Hurst, Eugene Braunwald, and John Ross, among the foremost authorities in the field. In 1972, he and Lenore moved back

to the Jacksonville, FL, area, where he entered private practice.

His reserved, even taciturn, demeanor belied a very active and inquisitive mind and wry sense of humor. He was a raconteur in the tradition of the Old South, which one might expect from a sixth generation Floridian. Public mien notwithstanding, he compulsively chronicled every one of his hundreds of field trips in bound logbooks, which span a meter (his preference over the foot/pound system) on his shell-room bookshelf.

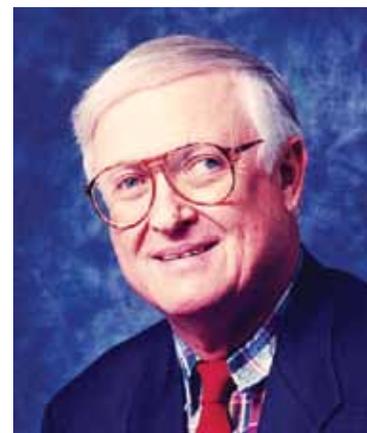
Henry was a deft field collector and keen taxonomist. He contributed to the formal literature, e.g., McCullagh *et al.* (2002), and was recognized for his achievements by Freshwater Mollusk Conservation Society [FWCS; see below]. Typical of Henry, he attended the ceremony, in NC, with some reluctance and only on the condition that he not "give a speech." His request was honored.

Williams (2014: 15) wrote "Since retiring, McCullagh continues to pursue regional mollusks, which has resulted in a computerized collection of about 3,500 lots of freshwater mussels and about 1,500 lots of freshwater and land snails. Hundreds of duplicates have been deposited in the FLMNH [Florida Museum of Natural History] and the OSU

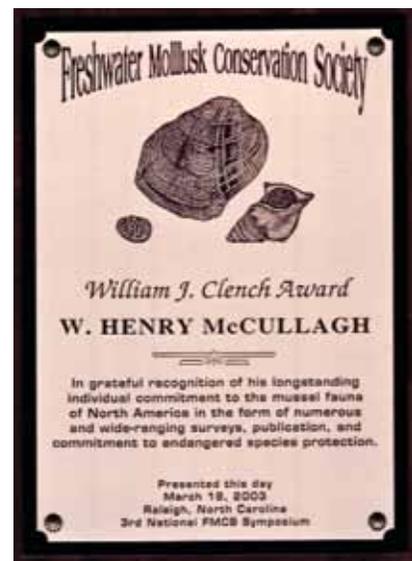
[Ohio State University] Museum of Biological Diversity in Columbus. In 2003 McCullagh was given the William J. Clench Memorial Award by the FCMS [R] for outstanding contributions to malacology, including his significant collections of aquatic mollusks."

Henry's collection will go to the FLMNH at the University of Florida, Gainesville, where some portions of it, used in monographs on AL and FL mussels (Williams *et al.*, 2008, 2014), already repose.

Henry McCullagh made his mark as a Southern Naturalist; he will be missed by many kindred spirits whose



Henry McCullagh



lives he enriched. He wished that his ashes be spread on the Chipola River in western Florida, near where his pioneer ancestors settled and he often returned in pursuit his beloved pearly mussels.

**McCullagh, W.H., J.D. Williams, S.W. McGregor, J.W. Pierson, and C. Lydeard. 2002.** The unionid (*Bivalvia*) fauna of the Sipsey River in northwestern Alabama, an aquatic hotspot. *American Malacological Bulletin* 17(1-2): 1-15. <<http://biodiversitylibrary.org/page/45999789>>

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**Williams, J.D., R.S. Butler, G.L. Warren, N.A. Johnson. 2014.** *Freshwater Mussels of Florida*. University of Alabama Press, Tuscaloosa, AL. [i]-xv + 1-498.

### James H. McLean

by Lindsey T. Groves

It is my sad malacological duty to report that former LACM Malacology curator James H. McLean passed away last Friday, November 11<sup>th</sup> at age 80. Jim joined the museum staff as curator of Invertebrate Zoology in 1964, whilst completing his PhD at Stanford under Myra Keen. He worked to build the IZ section into what would become the world-class sections of Crustacea, Echinoderms, Polychaetes, and Malacology. Jim traveled extensively worldwide to build the mollusk collection and obtained several NSF grants to house the growing collections. Along with LACM Ichthyology curator emeritus Bob Lavenberg, Jim helped to acquire the vast Alan Hancock Foundation and the UCLA collections. He published over 100 peer reviewed papers in major malacological journals, described over 300 molluscan taxa, and was honored by colleagues who named at least 27 species for him. He retired in 2001, but continued his daily routine of research until 2014 when his declining health started to take its toll. Jim's career goal to produce a monograph of the shelled gastropods of the eastern Pacific from central Baja, California, to Arctic Alaska, is being continued by 30+ worldwide specialists and will be edited by Daniel Geiger (Santa Barbara Museum of Natural History), Jann Vendetti



James H. McLean

(NHMLAC Malacology), and yours truly. Jim was a devout liberal, a Rolling Stones fan, and collected succulents from all over the world. This year the Western Society of Malacologists commemorates its 50<sup>th</sup> anniversary and will be held, very appropriately, in Los Angeles at the Natural History Museum of LA County and the University of Southern California with Jann Vendetti as President. Remembrances for Jim (Past WSM president 1974) and Bill Emerson (past WSM president, 1969) will be included. Donations may be made to the James H. McLean Student Grant in Collections-Based Research, see <http://westernsocietymalacology.org/grants/james-h-mclean-student-grant-in-collections-based-research/> for details. I will always be grateful to Jim as he hired me in 1988 to fulfill a NSF grant and I'm still here nearly 29 years later. Thank you Jim! Aloha.

**Doreen Mahany Prigel, 84**, of Calabash, N.C., passed away on Thursday, Nov. 3, 2016. Born on Dec. 5, 1931, in Caribou, Maine, she was the daughter of Ellery and Vivian Mahany. She was predeceased by her husband, Vincent Francis Prigel. Doreen was active at Saint Brendan's Catholic Church in Shallotte, N.C., and also with the North Carolina Shell Club. She was a retired registered nurse.

**Peggy Atkins Wilkerson, 91**, of New Bern passed away on September 21, 2016. A descendant of a pioneering Wake County, NC, family, she was one of nine children born to Margaret (Maggie) and Roger Merritt Atkins, of Holly Springs. She was preceded in death by her husband, C.W. (Bill) Wilkerson, in 1996; and by all her siblings: Robert, Anna Margaret, Percy, Elmo, Adelaide, Christeen, Charles and Adelle.



Peggy graduated from Fuquay Springs High School and Hardbarger's Business College. She retired from the United States Probation Office of the U.S. Courts. She was a devoted member of Centenary United Methodist Church, New Bern, and served as a volunteer in the church library. A charter member of the North Carolina Shell Club, Peggy will be remembered for sharing her seashells with many school children. She will also be remembered for sharing her Christmas poem passed down by her mother for many generations.

**Freda Willis** (1946-2016)

It is hard to decide what was more captivating, Freda's beautiful smile or her wonderful English accent. If you ever bought a T-shirt at a Sanibel Shell Show, you probably bought it from Freda. She helped sell them for years. No one could fold a T-shirt quicker or neater. Freda died on June 10th after a hard-fought battle with pancreatic cancer. She passed away at home with husband Dick and her son by her side.

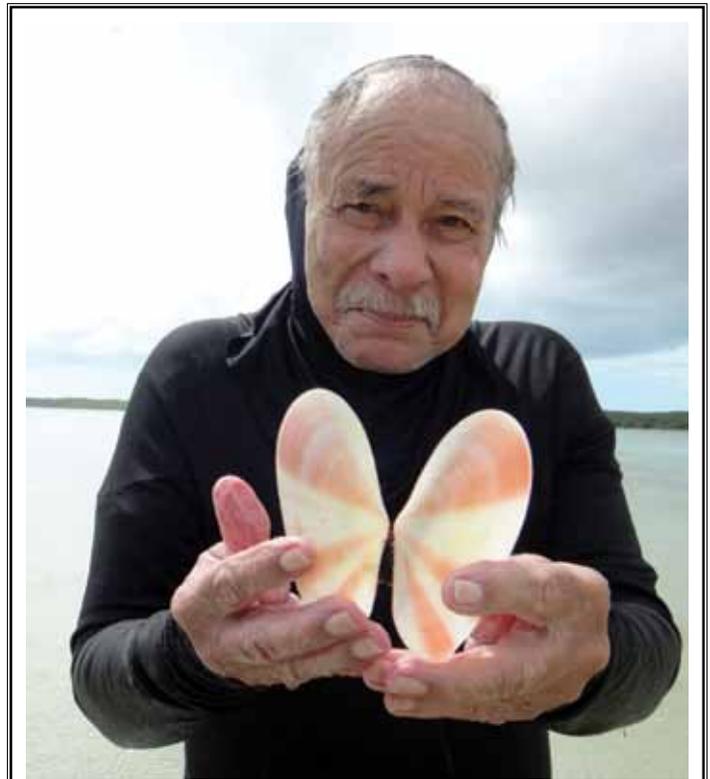


## Sanibel-Captiva Shell Club Gives \$27,000 in Grants

Each fall the Sanibel-Captiva Shell Club gives away all the profits from our March Sanibel Shell Show. This year the Club will distribute grants in the amount of \$27,000.00, which is \$2,000.00 more than last year and \$5,000.00 more than the year before. The recipients of this year's grants are as follows:

- Bailey-Matthews National Shell Museum \$ 6,000.00
- Sanibel-Captiva Conservation Foundation \$ 2,000.00
- Mote Marine Laboratory \$ 1,000.00
- Adopt-A-Class (Bailey-Matthews National Shell Museum) \$ 2,000.00
- Florida Gulf Coast University, Dept. of Marine & Ecological Science \$ 5,000.00
- Conchologists of America Scholarship Program \$ 1,000.00
- Sanibel Community House \$10,000.00

Each year the Club also awards the "The Sanibel-Captiva Shell Club/Mary & Al Bridell Memorial Fellowship in Marine Science" to a graduate student at the University of South Florida. This year that scholarship was in the amount of \$12,500.00 The Club started supporting graduate students at the university in 1982. In 1992 they joined hands with club members Mary & Al Bridell to establish the Memorial Fellowship. It is now self-sustaining. The 2015-2016 fellowship was awarded to Kaitlyn Colna. She is a Master of Science student majoring in Biological Oceanography. [From *The Junonia*, October 2016, the newsletter of the Sanibel-Captiva Shell Club, Inc.]



In the "just for the heck of it" file, here is COA member Jim Cordy with a 109 mm *Tellina radiata* Linnaeus, 1758, found on Millars Beach, Bahamas. While not quite a record size, it is certainly impressive. Apparently a bit of stormy weather washed up quite a few shells. Below is some of the beach wrack, plus a closer view of the helmets. Photos courtesy of Ellen Bulger.



The following is a letter from the COA board sent to 40 individual legislators, as well as the applicable agencies and subcommittees, concerning recent proposed changes to the regulations regarding the importation of species protected under the CITES (Convention on International Trade in Endangered Wild Species of Flora and Fauna) of 1973 and the F&W's own ECOS (Environmental Conservation Online System).

# CONCHOLOGISTS OF AMERICA, INC.

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Board of Directors  
4132 Ortega Forest Drive  
Jacksonville, FL 32210-5813

xx August, 2016

To: 40 legislators, subcommittees, and agencies (individually)

RE: Declaration for Importation or Exportation of Fish or Wildlife, 50 CFR 14.6114.64 and 14.94. OMB Control Number 1018-0012. <<https://www.fws.gov/policy/library/2016/2016-09952.html>>

Dear Sirs;

We are making this submission on behalf of the members of the Conchologists of America (COA), an organization devoted to the interests of shell collectors, to the esthetic and scientific aspects of conchology, and to the responsible collecting and preservation of mollusks (see **APPENDIX**). Founded in 1972, the COA has over 1000 members, mostly in the USA; publishes a quarterly, *American Conchologist*, probably the most widely-read journal dedicated to conchology; and hosts an annual convention attended by an average of 250 individuals. Its members and constituent shell clubs throughout the country provide educational outreach to their communities, contribute to the scientific record through activities such as field work, expositions, lectures, museum exhibits, and writing for a host of popular and scientific publications.

For these reasons we wish to call to your attention a problem of major concern to our membership and to the much larger community of thousands of seashell collectors throughout the United States and the world.

The United States Fish and Wildlife Service is currently in the process of promulgating regulations regarding the importation of species protected under the CITES (Convention on International Trade in Endangered Wild Species of Flora and Fauna) of 1973 and the F&W's own ECOS (Environmental Conservation Online System). Between the two they list 141 molluscan species under protection. Of these, 131 are indigenous to the United States (virtually all of which are either terrestrial or freshwater species), and 10 are from outside our country.

While the COA is on record as recognizing the need to protect these species, the structure of these regulations is such that absolute enforcement will greatly cripple amateur shell collecting in the United States and severely limit the access provided by amateurs and dealers to specimens and information vital to the research efforts of professional malacologists. More so than in other natural science realms, the amateur-professional relationship is tightly integrated and has existed for centuries. Shell clubs maintain lists of species in their area and provide materials from and information on the local habitat to the scientific community. Many amateurs participate in the seminars and conferences hosted by the professionals. Quite often you will find amateurs doing research in the same labs as the professionals. In turn the professionals and dealers are members of the local clubs and especially the COA.

The exact problem relates primarily to the USFWS requirement for a detailed species list and inventory of all collected materials to be submitted 48 hours prior to arrival in the U.S. Amateur collectors go on overseas shelling ventures and vacations that may last for one to two weeks, with daily collecting throughout. While these amateurs may conscientiously avoid collection of those species that are protected, it is virtually impossible to properly identify all species that are collected under field conditions. It is only after final cleaning and careful taxonomic research with identification guides and reference materials that such a detailed species list becomes possible.

We recognize and appreciate the incredibly difficult duty of the FWS inspectors who must make important on-the-spot decisions to allow or disallow entry and do so based on imperfect knowledge. With an estimated 100,000 species of mollusks, however, we contend that it is an unnecessary burden on the individual collector to prepare such a list, and further that it is both impractical and unnecessary for the USFWS to collect this detailed taxonomic information from individual collectors and small-business shell dealers on every incoming shipment involving low volumes of low-value, non-federally protected species of mollusk shells.

What we would like to see in the new regulations is a permitting process through which an individual collector could certify (either in advance of a trip or upon re-entry into the U.S.) that all materials to be collected and returned to the U.S. are nonliving and not subject to regulation under any existing U.S. or international law (in particular the Endangered Species Act and the Convention on International Trade in Endangered Species of Wild Fauna and Flora). Exempting the shells of non-protected mollusk species from the detailed listing requirement would greatly reduce the burden on both the collector and the FWS inspectors. Inspections could then be focused more sharply on those few species that are protected under law, and still permit collectors and dealers to bring in limited numbers of non-protected species for scientific study and display.

Sincerely yours,

The COA Board of Directors:

President: Harry G. Lee, MD, FLS, 4132 Ortega Forest Drive, Jacksonville, FL 32210-5813; (904) 389 4049

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Board Member At Large: Douglas Wolfe, PhD, Beaufort, NC

Board Member At Large: Ed Shuller, Apex, NC

(APPENDIX follows)

## APPENDIX

- In 1995 COA adopted a conservation resolution: “Whereas there are an estimated 100,000 species of living mollusks, many of great economic, ecological, and cultural importance to humans and whereas habitat destruction and commercial fisheries have had serious effects on mollusk populations worldwide, and whereas modern conchology continues the tradition of amateur naturalists exploring and documenting the natural world, be it resolved that the Conchologists of America endorses responsible scientific collecting as a means of monitoring the status of mollusk species and populations and promoting informed decision making in regulatory processes intended to safeguard mollusks and their habitats.”
- COA website: < <http://www.conchologistsofamerica.org/home/>>. The landing page includes documentation of COA’s Tax-exempt status under the provisions of Article 501 (c) (3) of the IRS Code, our Constitution (including its corporate status in FL), and our By-Laws.
- *American Conchologist* recent issues 2010-2012 (twelve numbers) are posted at: <<http://www.conchologistsofamerica.org/publications/table.asp>>.
- The COA Collector’s Code of Ethics is posted at <<http://www.conchologistsofamerica.org/conservation/ethics.asp>>.
- The COA resolution on conservation of mollusks is posted at <<http://www.conchologistsofamerica.org/conservation/resolution.asp>>.

\* \* \* \* \*

Because of the number and complexity of the rules and regulations, promulgated by international organizations and individual countries, to identify and protect endangered species, it is understandable that an organization or individual would experience difficulty interpreting, much less adhering to these rules. As members of the COA we must be particularly cognizant of, and attentive to, ongoing conservation efforts and regulations that bear on the collection, possession, transport, export, and import of shells. In view of this, the COA will publish (2017) a supplement to *American Conchologist* titled: ***A Review of National and International Regulations Concerned with Collection, Importation and Exportation of Shells (Mollusca)***. Authored by COA members Douglas A. Wolfe and Harry G. Lee, this publication will present applicable (published) regulations and procedures, and the concomitant dilemmas, faced by the American conchologist who collects shells while traveling abroad and wishes to bring them back to the United States for personal use and study. The primary aims of this publication are: 1) to identify the species of mollusks that are protected under national and international law, 2) to inform and educate the shell-collecting public on the complex and difficult responsibilities and procedures of regulatory agencies charged with enforcement of the protective measures, and 3) to critique those same protective measures and procedures as they apply to mollusk shells — with a view toward potential simplification and improved regulatory efficiency. The authors fully realize that this publication cannot possibly contain all published species lists and restrictions and that it will be superseded by updates and changes made by organizations and individual countries. Insofar as possible, however, this publication should provide an aide in understanding the different regulations and a codification of the majority of presently restricted species of Mollusca. All listed species cannot possibly be presented, but the majority that the collector may come in contact with are listed and the numbers (if not the names) of restricted species by country are listed. Investigation by individual collectors of a specific country’s restrictions is critical if collecting activities are planned for that country.

# A SHELL COLLECTOR'S NIGHTMARE

Marcus Coltro

Years ago we were informed by inspectors of the US Fish and Wildlife Service (FWS) at the Miami International Airport that we would need a permit to bring shells into the US. So we went to their Atlanta office and got an import/export permit that we have since always presented to Customs when bringing shells into the US.

For years we have paid for the permit annually, and we thought that was all we needed until I arrived in Miami in August 2015. The FWS inspector said I should have filled an online form and paid an inspection fee 48 hours prior of my arrival – I explained that no one explained this when we went to Atlanta, but the agent took all my shells away to inspect. I called later that day and they requested a full list to check if I had anything listed on CITES. I sent them the list by e-mail and waited more than 15 days until I was summoned to meet the inspector responsible for my case, who's name I'll withhold for now, from the FWS office in Miami.

She took all that time to read every single label on my shells to see if I had any protected species. She did not find any but she said she could not return them to me since I did not have a permit from Brazil, where I came from. I was surprised to learn that she used Google to translate a page from IBAMA (Brazilian equivalent to F&W) to decide whether I needed an export permit or not. I inquired if she contacted IBAMA in person to come to that conclusion and she said that all she needed was on the ordinance she found on IBAMA's webpage. This subject has been a drawn-out affair and we have not yet come to viable resolution.

Weeks later I sent her several questions to see how to legally proceed from now on, for collectors and dealers' sake. To make it short, this is what can be understood from her reply. (I can send by e-mail the full message in case anyone would like to read it.)

- **If you are entering the US with shells you must fill eDec form 3-177 (available on [edecs.fws.gov](http://edecs.fws.gov)), pay the inspection fee of \$93.00 and provide a full list of shells 48 hours prior arriving at any port;**
- **If you go on a shelling trip abroad you must do the same as above, but you do not need to pay the fee if you do not intend to sell the shells;**
- **Every red list or international regulation can be checked for protected species (it is up to you to find it out which one could be used in your case);**
- **They can keep your shells for as long as needed to inspect them, it can take several days or even weeks as happened to me;**
- **If you send or receive any parcel from abroad you will have to follow the same procedures mentioned in the first item (meaning, if you are a dealer you will have to pay the 93.00 fee even if you are just sending a 20.00 shell).**

These laws must be followed by everyone, not just dealers. If you have recently received or sent parcels without problems – you got lucky and the postal service may not have been looking for shells on every single parcel that day.

At first it seems not too complicated to follow these procedures, but it can be if you intend to exchange and/or buy shells frequently, since it will depend upon each individual inspector's decision whether to have your shells released or seized. Foreign dealers coming for a shell show cannot arrive 15 days before the show to give inspectors time to go through every single specimen. Not to mention how much work a US dealer should have and how much money they would spend to ship several international parcels per month.

One must understand these laws are not recent – a similar situation occurred in 1996 and was described in an article written by Gary Rosenberg. Back then nothing was done to change it. This time I have tried to contact as many dealers and collectors as possible to come up with a solution as I do not feel comfortable relying on luck. Amazingly, the reply (when I got one) was a suggestion to “let it go and wait until all this passes.” Others implied I just did not want to pay the inspection fee, which is not the case – my concern is not the fee, but the time it can take for FWS to process all shells and which red list will be used. I know by heart all shells listed in CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), but I am not familiar with locally protected shells from Timbuktu, for example.

I told all this to my late friend Steve Setzer from Arizona, and he said in his case it was even worse; he almost got arrested. He purchased an old collection that had several *Achatinella* from Hawaii. He was not sure if he could sell those in the US, so he called several FWS offices to know how to proceed. No one seemed to know until one of the inspectors started to exchange e-mails with him. After some weeks, a couple officers came to Steve's home and said they would have to confiscate all shells and they would give him a huge fine for having those shells in his possession. After some talk they lowered the fine to US\$500 and took away all the shells. Do you know what happened to those important specimens collected in the early

1900s? They were glued on cardboard and given to kids in local primary schools. We can say it was not a good purpose for such material, right?

What to do? We must have a special permit created! We should not fight the inspectors since they are simply following the laws by the book. We need to change these laws in our favor and get a permit to prevent this situation from reoccurring. Years ago in Australia they were able to gather all collectors and come up with a permit.

We must prove that we are not the bad guys and that the number of collectors and dealer is so small that it makes no sense to force us all to go through all this bureaucracy and be treated as if we were importing container-loads of craft shells.

We must show them our side and hope to be able to make some changes on the law:

- We have no use for hundreds of specimens of the same species, since there are just a few collectors interested on buying or trading. It is not like collectors and dealers trade in hundreds or thousands of shells.
- Shell collecting is an individual labor, no one is able to collect enough specimens when snorkeling or diving to deplete a local population.
- For collectors abroad it is very difficult to clean shells. Time is short, only a few specimens can be collected and processed.
- We do not always find perfect or adult specimens – defective or juveniles are of no interest and are left where they are found.
- If we get shells from fisherman, it is because they get them as fishery bycatch, with maybe few exceptions in the Philippines, Indonesia, and other places where fisherman can survive by collecting shells (but mostly used for shell craft, not specimen shells).
- If the main reason is to prevent protected species from being traded, then FWS must have in mind that there are few species listed in CITES (which is the major resource to be checked. It makes no sense to verify every single shell in a quest for something that isn't there.
- Many shells on the market nowadays are “recycled” specimens from old collections, which method places no stress on living biota.
- In the US there are just a few active shell clubs – and several are ending because younger generations have other interests nowadays.
- Usually scientific shell collections end up in a museum, and some such collections, based largely on imported specimens, formed the basis of the world's finest natural history museums.
- Many new species have been found and described by collectors, who, in turn, obtained their material from overseas collecting or otherwise via importation.

Our shellers' universe is small and it is getting smaller due to draconian collecting restrictions. The authorities must understand we collectors and dealers are an indispensable source of information driving the science of malacology. Shell collectors and dealers invest time and money, not always available for researchers – and we have the most important factor that moves our hobby: passion.

Many species are very hard to obtain in their natural habitat; some landsnails and freshwater mollusks are extinct and are only known thanks to shell collectors. For example, we have had specimens collected in the 19<sup>th</sup> century in downtown Rio de Janeiro, and obviously those shells do not live there anymore. I have been to places in the Caribbean and collected species of *Cerion* in areas of real estate development that completely destroyed all the snails' habitat – those shells, exported and imported by me, are now in several collections, including the Smithsonian.

In the past, people collecting plants and animals in nature, often in exotic places, were called naturalists. Nowadays they run the risk of being called smugglers or wanton anti-environmentalists. If we do not act now, future generations will only be able to see these magnificent creatures in museums. If you know any congressmen, now is the time to ask for their help.

There is no way to preserve wildlife without knowing exactly what one is protecting.

**Rosenberg, G. 1996.** Conchatenations Notice of seizure. *American Conchologist* 24(4): December

# Citizen scientists converge on Wilmington, North Carolina

John Timmerman, Chair North Carolina Shell Show



Cape Fear Museum in Wilmington North Carolina hosted the 41<sup>st</sup> North Carolina Shell Show on September 17-18, 2016. The show featured exhibits by citizen scientists hailing from Florida, Kentucky, Kansas, New Jersey, and many points in between. Over 380 feet of high quality scientific exhibits and artwork graced the show.

One goal of the Shell Show committee is advertising the show. Billboards were designed for the show by our hosting institution. I had several promotional interviews including one by Gina Gambony for “Communique” a locally produced feature which airs on the National Public Radio affiliate WHQR, 91.3 FM. One of our exhibitors, Phyllis Gray, heard the interview when she was in town for the show and suggested that the transcript be shared with the “American Conchologists” readers.

*This interview between John Timmerman (North Carolina Shell Club) and Gina Gambony (WHQR) aired on WHQR Public Radio on September 17, 2016. The audio, plus an additional segment about an exhibit by Timmerman, is available at [WHQR.org](http://WHQR.org).*

Gina (GG), inquired as to how many shells could be expected to be on view at the North Carolina Shell Show and John (JT), answered;

JT: I can't give an exact number. I think a safe bet would be tens of thousands.

GG: That's tens of thousands of shells he's talking about. The kind from the ocean. John Timmerman from the North Carolina Shell Club has loved sea shells since he was a child. He's the chair of the shell show exhibit at the Cape Fear Museum just this weekend. Here's more from John Timmerman about shells.

JT: North Carolina was the first really exciting shelling that I did when I was a child. My parents discovered Ocracoke back when it was much more ‘wildernessy’ than it is today. It was the mid ‘60s. The Bonner Bridge was brand new. The village had rolling black-outs back then, but the shelling was unbelievable.

GG: What can people expect to see in the Shell Show?

JT: The Shell Show is an interesting animal in that exhibitors from all over the country bring prepared exhibits about any theme they desire to profile. For instance, we have a lady coming from Kansas with an exhibit of shells from New Zealand. We have another man who has traveled the world his whole life. He's from Kentucky, bringing an exhibit of all the places he's gone over the world. We have a local man who goes to all the local islands and he's bringing a big collection of all North Carolina shells that he's picked up on beaches.

Shell Shows are competitive — we have awards that encourage professional quality. Important to science is keeping track of where the shell came from. If you don't know where the shell came from, it's worthless to scientists. Many of these awards are sponsored by institutions that are friends to museums, because amateur collectors are crucial to these museums that just don't have money to have people in the field all the time. So they encourage us and teach us to be good citizen scientists by these awards. They're essentially having us produce stuff that they will want in their collections one day.

For the public, you don't have to be into museum quality to really get into the Shell Show. We have all levels of people in the club, from your average weekend warrior that likes picking up pretty shells, to people that can speak enough Latin to put you to sleep. And at the show we have exhibits all the way from that. The man who's bringing his shells from NC, they're all shells he's found strictly on beaches; he doesn't ever take a live shell. It's all stuff that if you go to a North Carolina beach, you have a chance of finding. You don't have to know how to scuba dive and go to great depths offshore to find these shells.

GG: You said that he doesn't pick up living shells, is there an ethic about that?

JT: There's an ethic that all the shell collectors abide by. Even ones who take live shells, we do it very conservatively. That is to say, when you go to a flat, if you find one of something crawling around, you say well, there aren't a lot of them around here, you turn it loose. If you find a bucket of them, you look through it really carefully and keep one or two and put all the others back where [and] the way [you] found them. For example, if you find a shell under rocks and you decide you don't want it, you don't just toss it back into the water. You go find a rock and let it go under the rock because that's where it's used to living. Because we want to continue this and if you take all the shells you find, pretty soon you're not going to find any shells [be]cause they're all gone.

GG: But no need to worry, thanks to successful shell husbandry, there will be tens of thousands of shells at the shell show just this weekend at the Cape Fear Museum. That was the chair of the show, John Timmerman. Visit WHQR.org to see some of his photos.



**North Carolina Shell Show Billboard, designed and distributed by New Hanover County (North Carolina) Public Affairs.**

This and other publicity efforts did the job. The public arrived in droves. We had people waiting in line to be admitted to the show on both Saturday and Sunday.

This was the third year of a scavenger hunt, a very popular activity. For the first two years we provided stand-alone clues. This year we embedded the clues within exhibits in the show. People young and old enthusiastically completed the hunt. Upon completion they shared their results with our facilitators who invited them to select a prized shell.

The "People's Choice Award" went by overwhelming majority to Dr. Brady Semmel for his large collection of self-collected North Carolina shells. Brady specializes in collecting only shells that are dead. This has not hindered him in assembling a huge collection of beautifully documented shells displayed with photographic images. His exhibit provided a successful connection to many of our visitors.

Exhibitors contributed displays of shells and art spanning the globe to the pleasure of the public. Gene Everson's immense collection of self-collected shells wowed



**Birthday partygoers show off prized shells after completing the scavenger hunt. The group came to the shell show as a departure from the usual amusement park activity. Photograph by Vicky Wall.**



**"Greetings From the Beaches of North Carolina," by Brady Semmel. A young show attendee uses Brady Semmel's exhibit to identify a shell he just found at the Shell Giveaway. Photograph by Karlynn Morgan.**



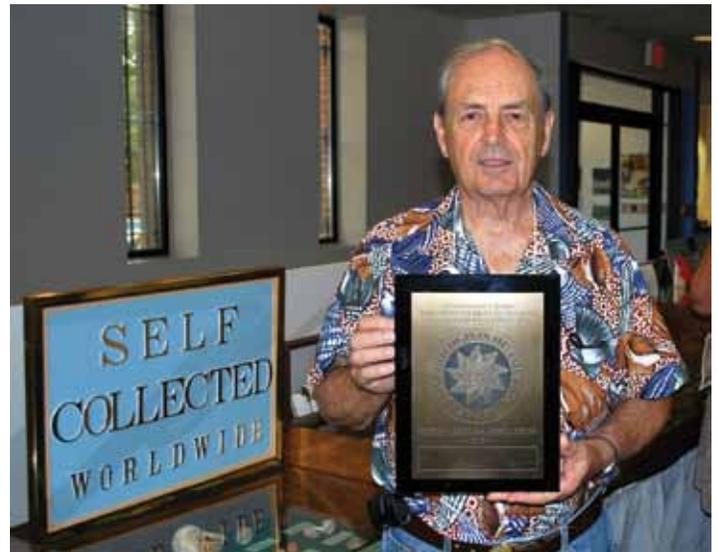
**Hand-carved and decorated shell jewelry inspired by traditional Native American designs, made by Bennie Pokemire. Photograph by Karlynn Morgan.**

everyone. It was hard for me to pick a favorite, but a *Tutufa bardeyi* (Jousseume, 1881), stood out as it is a personal favorite and super difficult to obtain from any source! Amy Dick brought a collection of mollusks collected from deep ocean hydrothermal vents providing many of us the first time ever chance to view these unique organisms. Jim and Linda Brunner's exhibit on the Philippine tangle net collecting of shells showed how the shells with the data description "tangle nets" that many of us are familiar with are caught. Karen Couch brought a beautiful exhibit of New Zealand shells, including many I had never seen. Bill Bennight's large collection of self-collected *Spondylus varius* G.B. Sowerby I, 1827, included one valve with a yellow hinge and the other hinge was rose. The shell earned him "Best Self-collected Shell (of The Show)." Doug Wolfe's exhibit of Peter Dance's 50 rare shells included at least one of each of the species profiled in the book, demonstrating Doug's resourceful collecting prowess. Doug's geoduck collection included a huge Mediterranean species contending as one of the largest bivalves in the show. Phyllis Gray shared with us a collection of shells featuring red and gold color. Gregory Curry brought a case of "to die for" fossil *Voluta* from Australia. In addition to his volute fossils, Greg also displayed a modern shell, *Tenebricola cukri* (Rokop, 1972), which earned the title "Best Shell In Show." Ron Hill featured yet another of his shells few of us have ever seen, *Austroharpa loisae* Rehder, 1973, and featured an exhibit profiling his experience at teaching elementary students about shells at a science fair in April 2016. Vicky Wall profiled The Golden Guide "Seashells of the World." Her exhibit touted it as "the best shell book ever published." I am sure many may dispute the claim, but as the first shell book I ever owned it certainly provided many hours of enjoyment and would get my vote. Ed Shuller and Jeannette Tysor profiled malacologists who described shells found in North Carolina. Their display was supported with a large collection of self-collected shells.

Our artists continue to produce stunning work inspired by the world's shells. Irmgard Cate for a couple years now has said, "This is the last show I will enter..." and then returns. This year she took home the top awards for "Craft Using Shells" for her miniature shell designs using actual pocket watches and the "Sailor's Valentine."

The shell dealers not only provide great opportunities for the collectors to add shells to their collections but are more than willing to share their knowledge with the public about the shell world and information about specific shells. Their gallery is always an exciting destination for the show goers, both newcomers and established experts. It is a "candy store" for shell lovers.

A popular feature of the show for many years is the shell giveaway. Show visitors are invited to select one shell that is their prize from large trays of shells club members and friends of the shell club have donated. Our facilitators help them identify their finds and teach a few things about the shell's natural history. The giveaway provides a taste of the adventure awaiting those who go into the field.



**Gene Everson won the COA Award for his display of worldwide self-collected shells. The display took 24 cases spread over 48 feet and contained highlights of Gene's lifetime collecting efforts around the world.**



**Jeannette Tysor & Ed Shuller were awarded the DuPont Trophy for "Malacologists Important in Describing NC Marine Mollusks." They also won the Alta Van Landingham Trophy for Best Self-Collected Exhibit.**

Going into the field, smelling marsh gas, getting one's feet wet, discovering the wonders of nature we call shells, starts many on the road to better understanding the earth's environments in a direct personal sense compared to one that can be abstract if only experienced by reading books or looking at the Internet. The North Carolina Shell Show provides a portal into the adventure in the study of mollusks. It inspires people who take away new energy encouraging the growth of existing and new citizen scientists.

John Timmerman



In 2017 the Conchologists of America will revisit the site of one of its earliest conventions.

Just the name Key West brings to mind images of palm trees and cool drinks, fantastic fishing and diving, great weather and beautiful scenery and sunsets. The ghosts of legendary figures such as Ernest Hemingway, Tennessee Williams, and Harry Truman are always near.

Key West's many distinct customs and cultures are a reflection of the island's rich mix of ethnicities, intertwining social classes, and accompanying diverse "lifestyles." Since the early 1800s, through an ongoing process of nurturing, preserving, and blending together on a speck of an island situated 150 miles out to sea and just 90 miles from Cuba, Key West culture and customs have peculiarly evolved.

In the 19<sup>th</sup> Century, most of the residents settling on the island were former British loyalist immigrants moving from the nearby Bahamas, Cubans who arrived in increasing numbers after 1830, and African Americans fleeing slavery in the southern states. Some of these newcomers joined the sponging and turtle industries while many others worked in the very lucrative cigar manufacturing industry. Fortunes were made in rum running and salvaging.

Through these trades the island became one of the richest cities in the U.S. – both financially and culturally. During this time a large collection of some of the most charming wooden Victorian architecture in the world was

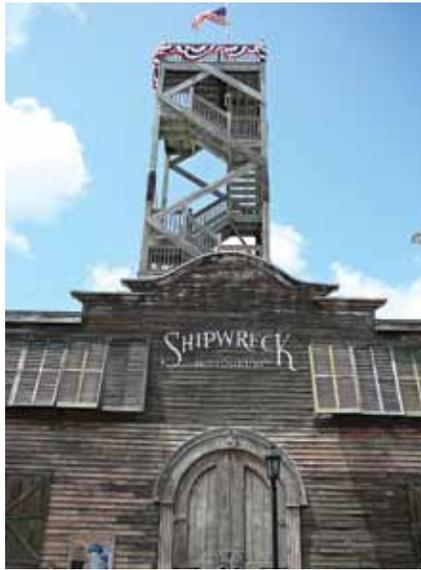
built and still stands today as part of the historic district of Key West. Today fishing is still an important local industry, treasure hunters continue to scour the sea bottom for ancient galleons lost at sea, and you can still find tiny open-air “mom and pop” cigar stores owned and operated by Cuban cigar rollers.

By the mid 20th Century, Key West was attracting some of the more famous intelligent and creative minds of the time, such as Henry Flagler, Harry S. Truman, Ernest Hemmingway, and Tennessee Williams - setting a precedent for an ongoing influx of remarkable individuals and intriguing characters seeking a more independent and artistic life-style. With more bars and more churches per capita than anywhere else in North America, the 1970s and 1980s attracted a whole new wave of creative free-thinkers with the arrival of literary groups, actors, musicians, treasure hunters, artists, designers, photographers, film makers, entrepreneurs, trades people, sailors, philanthropists, self-proclaimed “pirates” and members of the hippie “counter-culture,” openly gay and lesbian people from every walk of life, and expatriates, most of whom flawlessly blended into the tiny existing community of local Conchs, Cubans, and African Americans. From thence forward the

tropical island of Key West has morphed into an intriguing microcosm and one of the most interesting places to live and a unique tourist destinations in the U.S.A.

### The Key West Shipwreck Museum

A popular landmark due to its central location and its prominent lookout tower, which stands 65 feet above the city with unobstructed views of all Key West. The museum itself tells the story of the “wreckers” who once made their living recovering the cargo from shipwrecks (and saving the lives of sailors along the way). Actors interpret the exhibits, which includes treasure from the 1856 wreck of the *Issac Allerton*.



### Mallory Square

Home to the most famous celebration of the setting sun in the U.S., maybe the world. Each evening before dusk, thousands of visitors (and street performers, and vendors) gather on the Key West waterfront to raise a toast as the sun slowly falls toward the horizon, usually with a variety of picturesque sailboats in the foreground. Afterwards, the crowds tend to filter off into the local shops and restaurants, which include a cigar factory, shell warehouse, and sponge market housed in old warehouse buildings.



### The Little White House

U.S. President Harry S. Truman used this former Navy officer’s home as his winter White House for eight years during his presidency, spending almost half a year in Key West. Other presidents have also visited, most recently Bill Clinton in 2005. Located at 111 Front St., the Truman Little White House was built in 1890 as Key West grew in importance as a Navy base. Thomas Edison spent some time here, as well. Tours are offered every 15-20 minutes and cover the Truman years as well as the naval history of Key West, which not only includes a prominent role in the Spanish-American War, but also as an early submarine base active in the First and Second World Wars.



### Key West Aquarium

Located on Mallory Square in downtown Key West, the aquarium offers guided tours through a series of exhibits that include a touch tank, alligators and jellyfish, and hand-feeding of stingrays and sharks. Or, you can just wander the exhibits on your own. It’s a nice way to spend an hour in Key West.



### Duval Street

You can't visit Key West without strolling along Duval Street, which is home to many of Old Town's famous bars, restaurants, shops, bed & breakfasts, and historic sites. This long, straight main street runs from the Gulf of Mexico to the Atlantic Ocean, with the Southernmost House on one end and Mallory Square at the other. Duval Street is the address for watering holes like Sloppy Joe's, Captain Tony's, the Bull and Whistle, and the original Margaritaville. A feast for the eyes almost any time, Duval Street really comes to life at night when it's jammed with revelers hopping from bar to bar.



### National Key Deer Refuge, Big Pine Key

About 800 diminutive Key Deer, a stunted subspecies of white-tailed deer, inhabit the National Key Deer Refuge on Big Pine Key. This is an 84,000 acre wildlife refuge that includes forest, wetlands, and other wilderness biotypes. Visitors can hike nature trails and observe the deer and other wildlife, including those inhabiting the Blue Hole, a flooded former quarry, near the park's visitor center.

All of these places are included in pre-Convention tours but that's not all you can expect – there's lots to do in Old Key West.

Make your reservations at the Convention hotel today.



### Doubletree by Hilton Grand Key Resort

3990 S. Roosevelt Blvd,  
Key West, Florida, 33040

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Rates: Regular room: \$179 + tax

Upgrade to 1 bedroom suite: \$100 additional

Rates valid 3 days before and after the event

Toll free telephone (USA & Canada): 800-445-8667

From other countries, telephone: 305-293-1818

Or, online at [www.doubletreekeywest.com](http://www.doubletreekeywest.com)

With either method you must use the Group Code: **COA** to receive the special rate.

Free parking

Free shuttle to airport

Free shuttle to downtown Key West

Free Wi-Fi

Free pool and fitness room

And lots of old friends and perhaps some new friends. This is the COA premiere event of the year – you really do not want to miss out.



## The living and fossil *Busycon* whelks: Iconic mollusks of eastern North America

San Diego Shell Club, viii + 195 pp. By Edward J. Petuch, Robert F. Myers & David P. Berschauer, 2015. Spiral bound (if any remain): \$80.00 plus 8% tax and shipping; hardcover: \$100.00 plus 8% tax and shipping. Available from <http://www.sandiegoshellclub.com/store/>

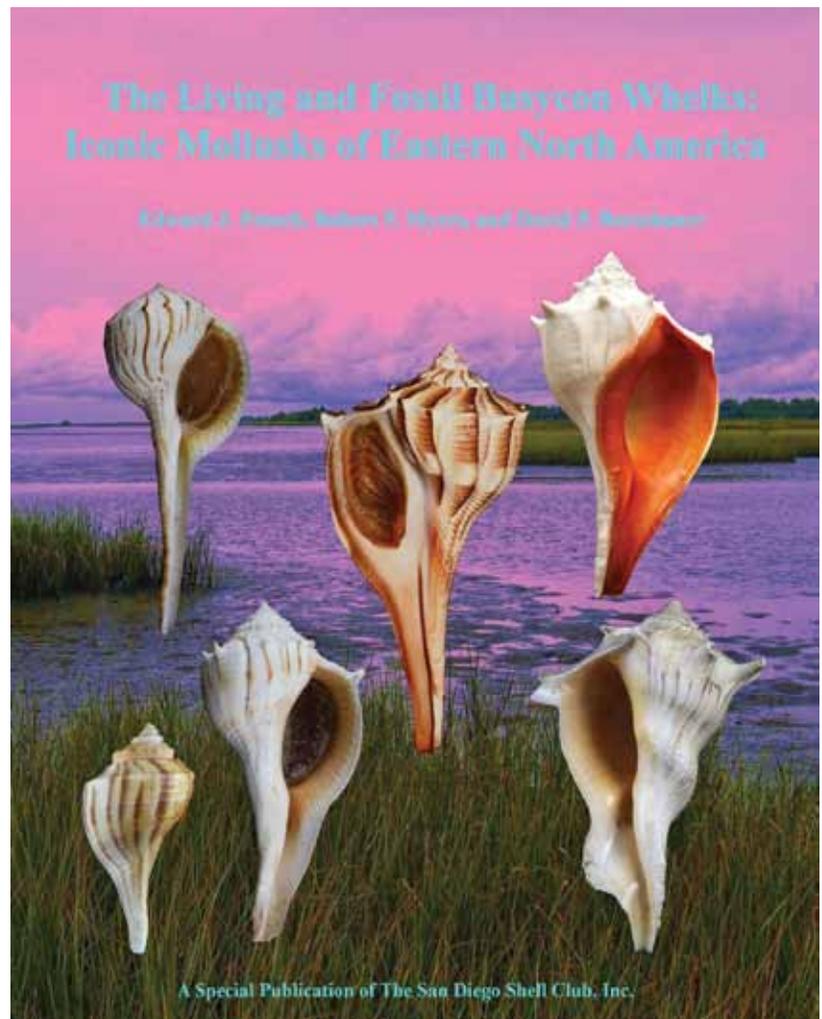
This book fully unravels the *Busycon* whelks with up-to-date information and full page color plates. These iconic American mollusks, even though conspicuous and relatively common along eastern North America, have until now a confusing history of classification and taxonomic nomenclature with placement in four different families at different times. This book hopefully settles this past confusion.

The color plates are exact to the species color. Easy to read with details on evolution, histories, and map localities, making it a great visual guide. Well organized alphabetical listing of genus and species. No flipping back and forth of pages trying to match names and images. The book contains over 120 color plates and maps, with pictures of these fascinating shells. Each section also includes photos of variant species.

Seventeen (17) Recent species are treated, including: *Busycon carica*, *B. eliceans*, *Sinistrofulgur sinistrum*, *S. laeostomum*, *S. pulleyi*, *S. perversum*, *Lindafulgur candelabrum*, *L. lyonsi*, *Busycoarctum coarctatum*, *Busycotypus canaliculatus*, *Fulguropsis spiratus*, *F. rachelcarsonae*, *F. keysensis*, *F. pyruloides*, *F. plagosus*, *F. plagosus galvestonensis*, *F. texanus*. Sixteen (16) species are found in eastern US coastal waters and one species is endemic to the Yucatan Peninsula, Mexico. In 1938 *Busycotypus canaliculatus* (the channeled whelk) was introduced by accident to the San Francisco Bay area, but is seemingly restricted to that area due to the cold waters of the Pacific. The details presented in this book give it a no-nonsense approach and I found it an reference.

Also included in this book is a 'Living *Busycon* & Fossil/Paleontology' information source that takes the reader to the fossil progenitors (over 100 species) of the *Busycon* whelks. Photos are provided for each species. Great for identification and comparison for the fossil hunter and shell collector.

Habitat ecology and feeding strategies are also included, with explanations of such strategies as engulfing and "edge chipping," and a listing of favorite foods and principal



food sources with preferred habitat descriptions and photos of the different species in their natural habitats. Very helpful in the field.

I found this book to be an excellent reference guide with detailed descriptions and exact color photos. Bringing together fossil and living *Busycon* whelks in one source makes this an invaluable book for the collector. This is a special publication of The San Diego Shell Club, Inc.

Tammy L. Myers

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