

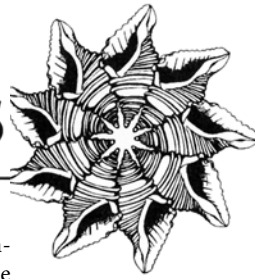
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American CONCHOLOGIST



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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Editor’s comments: We start off this issue with a plea for auction donations for COA’s continuing efforts to fund our grant program. The proceeds from our silent and oral auctions are a large part of COA’s grant revenues. Especially needed are high quality items for the oral auction. Contact Dave Green (see p. 4) if you think you can help. Next is a quick announcement on the reopening of the Bailey-Matthews Shell Museum. It has been greatly expanded with new displays, including aquaria with live mollusks. Simon Aiken then talks about G. Thomas Watters and his work on Hispaniola with Annulariidae. This is followed by a report of a rock-eating bivalve. Really. Then we join Gene Everson on one of his shelling trips. This time he takes us way off the beaten path to Mozambique and Madagascar. Mike Sanchez then describes the construction of a shell exhibit at the New Mexico Museum of Natural History and Science. What he does not discuss is that he was **the** driving force behind this project to bring a bit of the sea to our land-locked population. Next, Alan Gettleman extends an invite once again to COA 20/20 in Melbourne, Florida. It looks like a grand event. Thanks to Emilio García we have a report of an unusual finding on a Louisiana beach. Emilio’s report is followed by two COA grant recipient reports: Christina Collins working on invasive mussels and Micaela de Lucía researching very small freshwater snails in Argentina. Our “In memoriam” (p. 36) is another tough one, with five COA members no longer with us. Vicky Wall (when not winning awards at shell shows) presents the most recent list of shell shows (also available on the COA web site: www.conchologist-sofamerica.org). Speaking of shell shows, we have three that were held early in 2020: Astronaut Trail, Broward, and Sarasota. *Tom Eichhorst*

Front cover: *Abbottella moreletiana* (Crosse, 1873) photographed in the Dominican Republic by Simon Aiken. The species is known only from a small area of karst formations in Los Haitises National Park, on steep slopes with thick tropical vegetation. This habitat is completely inaccessible by road, air, or hiking. A motorized canoe is required to reach a series of narrow inlets called the “Mouth of Hell” (Boca del Infierno). Three closely-related species are known to range across Los Haitises from west to east: *A. crataegus* Watters, 2016, *A. domingoensis* Bartsch, 1946, and *A. moreletiana*. Most of the area is completely unexplored. The image on p. 46 shows details of the three species. They are only 10-11mm and, even with magnification, can be difficult to properly identify.

Back cover: *Erronea onyx* “Linnaeus, 1758” is a popular collector’s shell as it displays rich vibrant shades of cream, orange, dark brown, and black. *In situ* it is even more breath-taking with its glossy shell partially covered with a fibrous mantle. This image is courtesy of contributor Charles Rawlings and was taken at 35 feet on black sand off Sulawesi, Indonesia.

Shells Needed for the Oral Auction in Melbourne, Florida

Dave Green
Oral Auction Chairman



We are already into the first quarter of 2020 and the COA Convention in Melbourne, Florida, will be here in a very short time. As Oral Auction Chairman for this year's convention, I am reaching out to you requesting generous donations of shells for the oral auction in June.

We have received a few very nice donations since the 2019 COA Convention on Captiva Island last summer, but we are really hurting for quality shells to meet my goal of 100+ auction lots that can be utilized in the oral auction. In talking with John and Cheryl Jacobs, it seems we are on track for several quality silent auctions during the convention, but the oral auction donations have been lacking in number and quality.

As you are aware, COA has been blessed during the last three years by receiving several large and outstanding shell collections as donations to the organization. As of this time, all of those donated items have been used and we are back to our old way of seeking donations of shells from our members and our faithful dealers. The last three years have been fun and exciting but the good times are gone for now and it is time to go back to work if we are to meet our commitments to our educational grant program.

Please examine your collections and see what items might be donated to COA for the oral auction. I would like to receive your donations by Wednesday, April 15, if possible, as it takes a considerable amount of time and effort to get the auction ready for presentation at the convention.

Please ship your donations to:

Dave Green, Oral Auction Chairman, 3522 Bassett Court, Missouri City, Texas 77459 USA.

If you have questions or comments, please email me at dgreen2@entouch.net or call me at 713-435-9971. I read emails several times daily and I have my cell phone with me most of the time.

As always, I sincerely appreciate all the support each and everyone has given to the oral auction all these past years and I hope you will continue that support for COA 2020 in Melbourne. COA will certainly welcome your donations. I look forward to seeing all our members in Melbourne, Florida in June.

**Please do not forget the
Wednesday, April 15, 2020,
deadline for receiving donations.**



COA auctioneers: Hank Chaney (L) and Paul Callomon (R) await your generous donations.



Shell museum once again OPEN

These are a few images pulled off of the Internet announcing the newly refurbished and redesigned Bailey-Matthews Shell Museum reopening. (Right): a partial view of the new museum facade. (Below): images from the museum web site offering interesting molluscan-related news on the 'Curator's Corner,' a shell guide app, and the latest on the new museum aquarium – 'Living Collection Gallery.' All of this can be accessed at: <https://www.shellmuseum.org/>



Hispaniolan snails described by G. Thomas Watters (1953–2019)

Simon Aiken

(Photos of Tom Watters courtesy of Alan Gettleman)

The recent death of George Thomas ‘Tom’ Watters last October has saddened his many friends and his colleagues across different disciplines. In the previous *American Conchologist* Alan Gettleman eloquently summarized the respect that Tom engendered among his peers, and the warmth he engendered amongst his friends (December 2019, p.37-38). In a sense I feel supremely unqualified to add to this, since I was destined never to meet Tom in person. Yet we corresponded regularly for 20 years, and Tom helped me enormously with my own molluscan ambitions. Tom was always eager to share his experience with field work. He gave me so much advice with collecting techniques, localities, and shell identification and even assisted me in what I’d term ‘survival’ in sometimes hostile environments. Most importantly, Tom provided constant encouragement for me to pursue my interests.

Tom was curator of one the largest freshwater bivalve collections in the world, at the Museum of Biological Diversity, The Ohio State University. Unsurprisingly, many malacologists will associate him with his work on freshwater mussels, but Tom also had a passion for the terrestrial gastropods of Hispaniola, and particularly the family Annulariidae. His legacy includes descriptions of many new species from the karst formations of Hispaniola, and he was advancing the taxonomy of this group right up until his death. In this article I pay tribute to Tom through ‘live’ photos of some of the exquisite Hispaniolan snails that he described.

(Below & right): Tom Watters on the trail of land snails in the Dominican Republic.





Articulipoma rhodei Watters, 2012, lives high in the Sierra de Baoruco, a sparsely populated mountain range in the far south of Hispaniola. Adults are almost always decollate, but this individual with an intact apex was photographed near the village of Aguas Negras. Tom named the species after Homer Rhode of Englewood, FL.



Chondropoma vanattae polychroma Watters, 2012, is a distinctively banded form of a *Chondropoma* that is widespread in the Barahona Peninsula (southern Hispaniola). I have observed it estivating while hanging from a thread, similarly to some Cuban Annulariidae.



Gyraxis excalibur Watters, 2018, (family Urocoptidae) is a relatively large species from the Samaná Peninsula, which was apparently overlooked by Bartsch. Its unusual taper and relatively smooth sculpture readily distinguish it from *G. samana* (Clench, 1966).



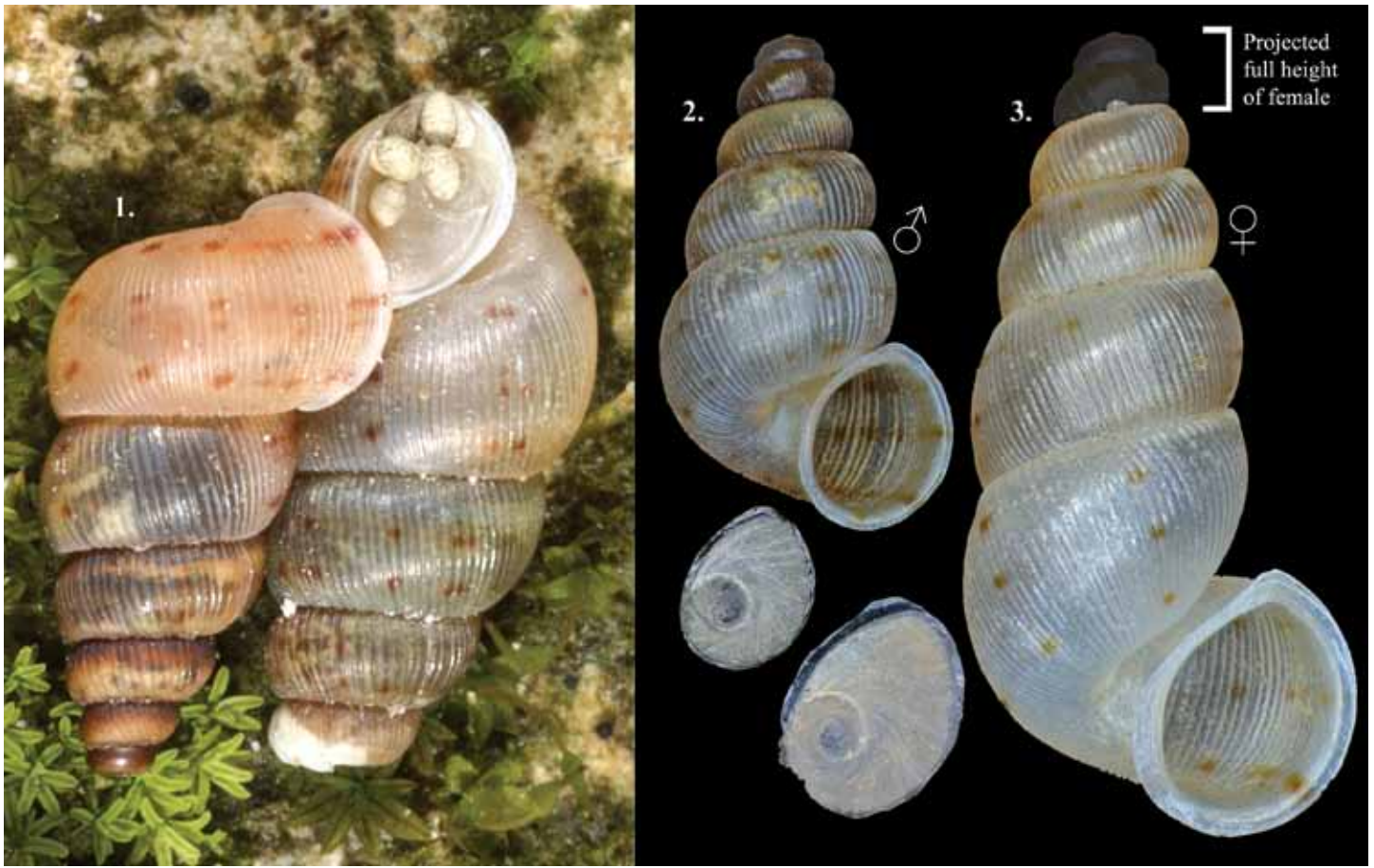
Chondropoma pumilum Watters & Duffy, 2010, occupies an unusual semi-manmade niche – an abandoned quarry high in the Sierra de Baoruco has been ‘reclaimed’ by the surrounding forest, creating an ideal habitat for this species and also for *Licina bartschi* Watters, 2012.



Parachondria joyeuse Watters, 2016, is supremely variable in pattern, from a dense brown to almost pure white. Typically it estivates in under-hangs of cliff faces, making living specimens very hard to find. This is the first photo of an active *P. joyeuse*.



Chondropoma oculoem Watters & Duffy, 2010, is unusually small for the genus – this male is about 6mm long. It is known from a fairly wide area of the Barahona Peninsula, but seems to live in quite isolated colonies. See further details on the facing page.



Chondropoma oculeum exhibits marked sexual dimorphism. Males are smaller than females. Females have a deciduous protoconch whereas males always remain intact. 1. Mating pair; 2. male specimen, 6.1mm; 3. female specimen, 9.1mm, plus 'simulated' spire to approximate the full height.



Leiabbottella galaxius Watters, 2010, is a cliff-dwelling species, very rarely seen alive. Tom originally proposed the new genus *Leiabbottella* Watters, 2010, for this species alone. This individual was photographed in María Trinidad Sánchez Province on the north coast of the Dominican Republic.



Leiabbottella thompsoni Watters, 2013, is a secretive species from Los Haitises National Park. Tom named it in honor of Fred Thompson (formerly of University of Florida) who worked extensively in Hispaniola, and described the 'snowflake snail' (*Meganipha rhexta*) featured in *American Conchologist* (Aiken, Dec. 2018).



Rolleia oberi Watters, 2010, lives on exposed mountain ridges in the Loma del Puerto, in the northern Dominican Republic. The two color forms may correspond to males and females. Tom made enormous contributions to our understanding of the Abbottellinae, the subfamily in which genus *Rolleia* is placed.



Abbottella urbana Watters, 2012, is a stark example of a mollusk exploiting a niche. The very aptly named ‘urban’ *Abbottella* lives literally in the centre of Santo Domingo, an urban sprawl of 3 million people. The most remarkable fact about this species is that it remained unknown to science until 2012.



Abbottella tenebrosa Watters, 2013, is a variable species from El Choco National Park in the north of the Dominican Republic. Literally it is the ‘gloomy’ *Abbottella*.



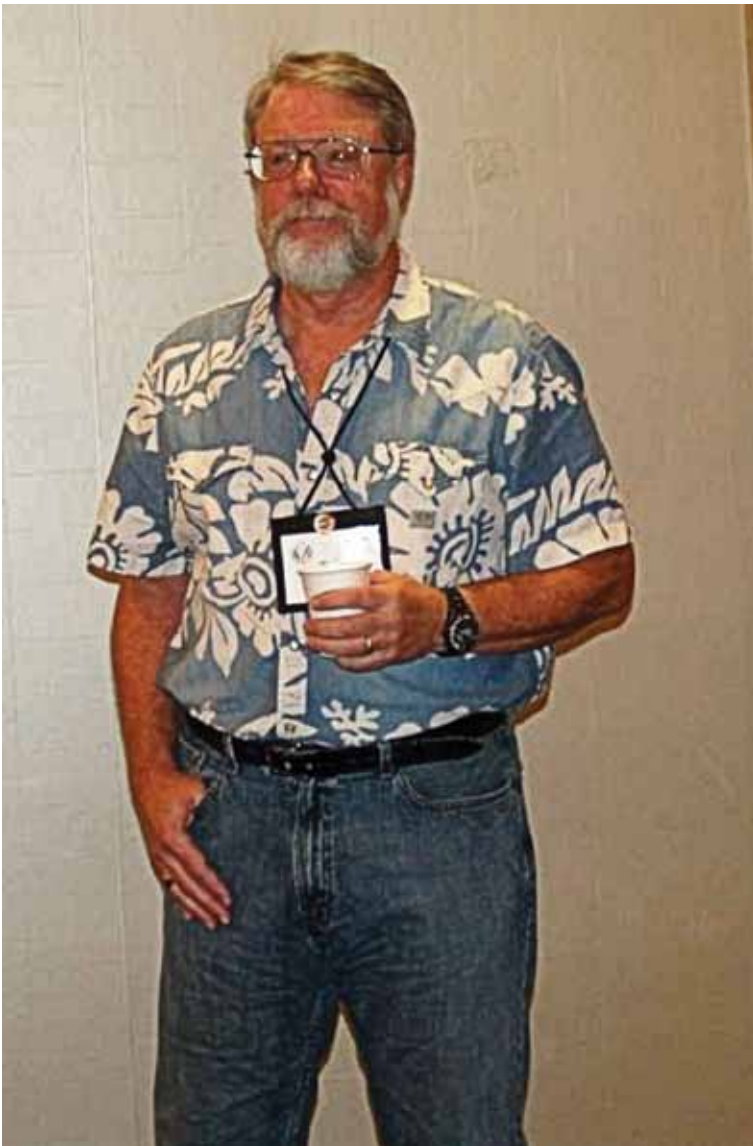
This unusual banded individual of *A. tenebrosa* in fact matches perfectly with one of Tom’s type specimens. Like most of the Abbottellinae, they are agile and quite fast-moving.



This new *Rolleia* species will be the final species described by Tom Watters (Watters, M. Smith & Sneddon, in press, *Nautilus*, March 2020). It is another high altitude species with a very limited range.



Abbottella crataegus Watters, 2016, inhabits a narrow range at the western edge of Los Haitises National Park. I took this photo on the day Tom died (10/10/2019). He never saw a living specimen of this wonderful species.



Tom Watters listens to a presentation at a COA convention. Fairly well-known as an expert on freshwater mussels, his involvement and contribution towards our knowledge of small Caribbean land snails is less-known.

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Simon Aiken

All photos of snails are © Simon Aiken
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(Opposite) Selected Annulariidae species described by Tom Watters, all endemic to Hispaniola.

1. *Abbottella crataegus* Watters, 2016, 12.4mm,
2. *Abbottella tenebrosa* Watters, 2013, 7.3mm,
3. *Abbottella urbana* Watters, 2012, 5.7mm,
4. *Leiabbottella galaxius* Watters, 2010, 8.0mm,
5. *Leiabbottella thompsoni* Watters, 2013, 13.4mm,
6. *Rolleia* sp. nov. Watters, Smith & Sneddon (in press), 9.9mm,
7. *Rolleia oberi* Watters, 2010, 9.4mm,
8. *Parachondria gettlemani* Watters, 2012, 14.8mm,
9. *Parachondria joyeuse* Watters, 2016, 14.7mm,
10. *Parachondria heatheraikenae* Watters, 2016, 14.4mm,
11. *Licina bartschi* Watters, 2012, 19.7mm,
12. *Articulipoma rhodei* Watters, 2012, 16.8mm,
13. *Chondropomium blaineorum* Watters, 2012, 15.7mm,
14. *Chondropoma marmoreum* Watters & Duffy, 2010, 18.8mm,
15. *Chondropoma vanattae polychroma* Watters, 2012, 10.0mm,
16. *Chondropoma pumilum* Watters & Duffy, 2010, 17.0mm,
17. *Chondropoma morsecodex* Watters, 2012, 13.1mm,
18. *Chondropoma oculeum* Watters & Duffy, 2010, 6.1mm, 9.1mm.



A newly described bivalve (shipworm) that eats rocks (Bivalvia: Heterodonta: Myida: Teredinidae)

Thomas Eichhorst

(images adapted from Shipway et al., 2019)

The family Teredinidae (15 genera, 70+ species) are marine bivalves (at least we thought they were marine) with small abbreviated shells and long fleshy bodies. They have long been the bane of anyone trying to maintain wooden structures, whether docks or boats, in the water. Shipworms, sometimes called ‘termites of the sea’ or ‘teredo worms’, bore into and eventually destroy immersed wood, causing untold costly damage around the world. A discovery by Lozouet & Plaziat (2008) on the Abatan River on Bohol Island, Philippines, however, would lead to a description in 2019 of a new species of Teredinidae that contradicts much of what we thought we knew about this family. Before this discovery we ‘knew’ that Teredinidae shipworms were: 1. marine, 2. obligate wood-borers, 3. most digest the wood

they eat in a structure extending from the stomach called the caecum, and 4. cover their body with a calcareous tube that lines the inside of the burrow from the aperture to the animal’s posterior (where the small shell valves are located). This new species has been placed in a new genus, *Lithoredo* Shipway, Distel & Rosenberg, 2019, (bringing the count to 16 genera in Teredinidae) described with a single species, *Lithoredo abatanica* Shipway, Distel & Rosenberg, 2019.

In the upper reaches of a freshwater stream on Bohol Island, Philippines, this new shipworm was discovered burrowing in a limestone cliff face at depths of less than two meters. This finding immediately breaks the ‘typical’ shipworm character by being a rock-borer versus a wood-borer and living in fresh water versus salt water. *Lithoredo abatanica*, unlike other members of its family, does not eat and digest wood, but instead eats carbonate limestone, creating smooth bore holes familiar to anyone who has seen driftwood that has been the home and meal for typical marine wood-boring shipworms. Interpretation of fossil traces of shipworm borings may now need to be re-examined in light of this new finding. *Lithoredo abatanica* also lacks the typical shipworm caecum (wood digesting organ), but it does

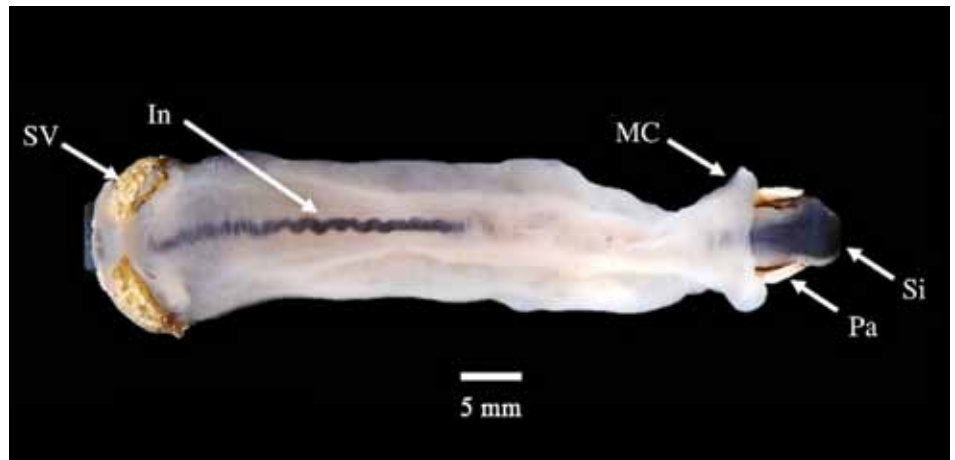


While this may look like a piece of wood that housed shipworm bivalves, it is actually a rock that housed the new shipworm species, *Lithoredo abatanica*.

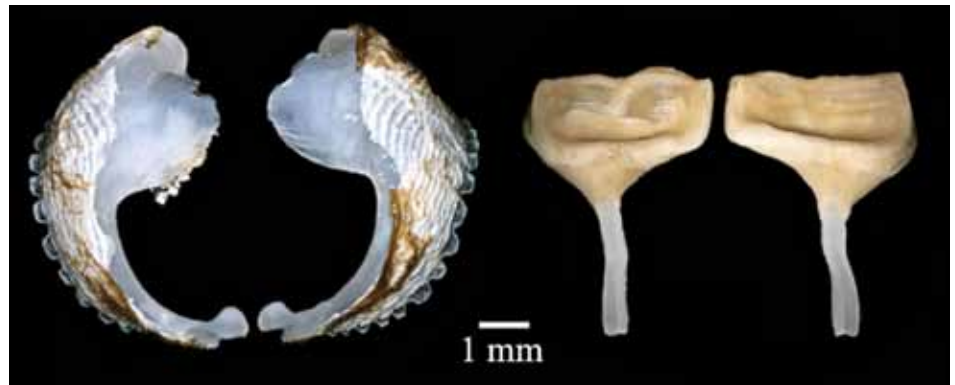
lay down a calcareous tube lining the inside of the boring. Despite these differences, phylogenetic analysis establishes them in Teredinidae. According to the authors there is at least one other freshwater rock-boring bivalve, *Lignopholas fluminalis* (Blandford, 1867), in the family Pholadidae (angel wings, *Cyrtopleura costata* “Linnaeus, 1758,” fall within this family) (Shipway, et al., 2019).

The obvious question is, “If *Lithoredo abatanica* eats rock, where does it get its sustenance?” Certainly not from the limestone rock it ingests and subsequently excretes as sand. Reef-dwelling parrot fish (family Scaridae) eat coral and excrete calcium sand -- but they subsist on the small animals that build and live in the calcium reef structures. There is no equivalent in limestone. Wood-boring members of the Teredinidae are able to digest the wood they bore through. Investigation of intestinal contents of *L. abatanica* showed only the minerals found in the surrounding rock. *L. abatanica* eats and forms vast tunnels in rock with no protein, carbohydrate, or sugar content. The answer to its source of sustenance is unknown at present but guesses include: planktonic matter from surrounding water, algae and other surface coverings, or a symbiotic bacterial relationship.

Lithoredo abatanica, approximately 70mm, (holotype: PMS-4312Y), (In) intestine, (MC) mantle collar, (Pa) pallet (structure of calcium and periostracum, exclusive to the Teredinidae), (Si) siphon, (SV) shell valve. The two small shell valves are located on the anterior end of the animal.



Magnified views the two shell valves (left) and the pair of pallets (right). Pallets are periostracum covered calcareous structures in the Teredinidae that serve as "... specialized organs located at the base of the siphons which function to close the burrow when the siphons are withdrawn." (Turner, 1966)



A calcareous tube produced by *Lithoredo abatanica* that has been removed from the limestone rock in which it was embedded. A small portion of a second tube with the remaining limestone separating the two tubes can be seen just below the main tube.



Lozouet, P. & J.C. Plaziat. 2008. *Mangrove environments and molluscs. Abatan River, Bohol and Panglao Islands, Central Philippines.* ConchBooks, Hackenheim, Germany.

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Thomas Eichhorst
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A shelling trip to Mozambique and Madagascar

Gene Everson



Fishermen off the coast of Mozambique brave the elements in primitive wooden boats. Image from Wikipedia Creative Commons.

In July and August 2018, Silvard Kool (world famous pianist and malacologist) and I took a 28 day diving & shelling trip to Mozambique and Madagascar. The first two weeks were at the Nuarro Lodge and Eco Resort in northern Mozambique, about a two hour drive from Nacala. This is a 1,500 acre resort run by a husband & wife. The wife, Tibeia, was one of our dive masters, while the husband oversaw everything else, with expertise in the kitchen. Shell collectors normally stay far away from an Eco Resort, but we read online that, if you were open water certified and had a dive partner, you could make unlimited, unsupervised shore dives.

We collected the first night on an exposed shoreline reef at low tide. There were *Bursa rhodostoma*, crabbed *Tutufa bubo*, *Mitra imperialis*, *Strombus decorus* and *S. mutabilis*, *Clanculus puniceus*, *Harpa amouretta* f. *crassa*, crabbed *Chicoreus groschi*, *Conus vexillum*, many nerites including *Nerita textilis* 4-5' above the water line on shoreline rocks, and *Oliva caerulea* in sand trails.

On our first day dive there were live *Harpa major*, the first live harps that I'd seen in day time. *Haustellum langleitae*, *Lophiotoma albina* (77mm), *Conus maldivus*, *Strombus decorus*, and *Polinices albumen*, were all found on sand in 40-50' of water. That night, in honor of the birthday of one of three female Dutch researchers also staying at the Nuarro Lodge, there was a brie (barbeque) of lamb chops, pork rashers, barracuda, grits, and homemade lemon flavored baobob ice cream.



Baobab trees in Madagascar, an island of varied climes and unique flora and fauna. Image from Wikipedia Creative Commons.

The next day we made our first shore dive down to 35'. This was the first time I'd seen *Rhinoclavis nobilis*, listed as rare, but here common in sand trails. We also saw *Rhinoclavis kochi* and *Cerithium cerithina*, as well as *Conus legatus*, *C. emaciatus*, and *C. augur*. The epitonium, *Eglisia tricarinata*, was found in 20' on a rock reef, and in shallow water was a *Bursa bufonia* on a rock at 5' and a *Tutufa bubo* beside a rock at 10'. We made our first night dive but were closely watched by a dive master. I only picked up a dead



Conus augur ([Lightfoot], 1786)



Bursa rosa (Perry, 1811)



Conus maldivus (Hwass, 1792)



Haustellum langleitae Houart, 1993



Lophiotoma albina
(Lamarck, 1822)

Laevicardium biradiatum, but we saw the most magnificent pair of *Lambis truncata* and a large *Cassis cornuta*.

On our next day dive I found my best murex, a *Naquetia vokesae* at 80' tucked under an overhanging coral head. The *Strombus lentiginos* were the largest and best colored that I had ever seen and I collected my first one in Guam in 1966. There were more *Bursa rosa* and abundant *Rhinoclavis fasciata*.

We took a long boat drive the next day to a different habitat of sand and mangroves in Memba Bay. We each found a *Vexillum intermedium*. I found an 83.3mm *Dentalium longitortum*, *Cymatium vespaeum* and *C. muricinum*, *Psilaxis oxytropis*, *Tonna canaliculata*, *Conus striatellus*, and many *Afrophysema eutorna* (Lucinidae), plus several small species and shells found before.

The next day was in Nuarro Bay, at a site called Fish Alley. I found a large *Lambis crocata* (184mm), while my largest before was 128.5 found in the Solomons. I collected my first *Septa closei* and *Antigona crispata*, plus a *Distorsio*, small *Haliotis*, and more *Strombus*. The next day was another shore dive where I found my first *Conus imperialis* f. *fuscatus*, as well as *Conus terebra*, *C. maldivus*, *C. rattus*, *C. capitanus*, *Bulla ventricosa*, *Strombus maculatus*, and many olives. That night we rode around the property in the back of a pickup truck looking for the nocturnal bush babies. No luck there but we did spot an Eagle Owl, the largest of their three owl species.

Another day, another shore dive, where I saw several *Lambis arthritica* for the first time. There were *Conus miliaris*, a small *C. tulipa*, and a very large *C. litoglyphus*.



Tutufa bubo (Linnaeus, 1758)



Rhinoclavis nobilis (Reeve, 1855)



Harpa major Röding, 1798



Naquetia vokesae (Houart, 1986)



Lambis crocata (Link, 1807)



Lambis scorpius indomaris
(Abbott, R.T., 1961)



Septa closeli (Beu, 1987)

Now on to northern Madagascar, just across the Mozambique Channel. I'd guess about an hour jet flight, but no, this is the third world and it takes 3 days and 8 hours scheduled flight time to get there. We arrived at Nosy Be and took a small boat, seven km to Saketia Island. In beach drift there was *Conus maldivus*, *Bullia*, *Monodonta labio*, and several species of nerites. That night we waded around sand and rocks and I found my first *Volema pyrum*. It was crabbed & large at 55mm, while Silvard had found two live but smaller specimens on the exposed reef in Mozambique. There were also *Nassarius olivaceus* and *Conus ebraeus*.

Our first day dive on sand in 30-36' of water, we found *Canarium fusiforme*, both color patterned and white, a large *Cymatium pileare*, *Conus maldivus*, many *C. lividus*, a *Tellina crucigera*, and *Semele duplicata*. Bivalves were very scarce. I can't remember a dive trip without collecting a single live bivalve.

That night we walked the water line at low tide and found *Conus figulinus* and small *C. betulinus*, the first time I'd seen both species exposed above water. In sand trails were black *Oliva tigrina* f. *fallax* and *Oliva tigrina* f. *glandiformis*, also *Strombus gibberulus gibberulus*.

The next afternoon, a resort employee walked out of the undergrowth next to the chaise lounges with a 5' Madagascar boa snake (*Acrantophis madagascariensis*). That night in 30-35' of water I collected my first *Lambis scorpius indomaris*, *Conus gubernator*, *C. muriculatus*, *Terebra nebulosa*, and more *Canarium fusiforme*.

The day dives were cancelled due to strong currents, so we walked the water's edge at the night's low tide. There was a dead *Phasianella solida* and common small cones and cockles, but the shell of the night was a beautiful, live *Cypraea lamarckii* that Silvard found exposed on the sand.

The next day dive on August 1st did not produce much, but the day after was very interesting. At 47' on sand and small coral rocks I found a *Lyrocardiumanaxium*, and we were frustrated at all the nice looking sand trails that

ended in no shells. We finally realized that each trail ended at a small coral of either one or two polyps. Back at the room, Silvard googled 'walking corals' and found many hits. This coral grows around a gastropod shell and the aperture is inhabited by a sipunculid worm that pushes the coral through the sand. You can see images of this on YouTube by typing "walking corals."

The following day dive was good for cones. *Conus augur*, *C. maldivus*, *C. imperialis* f. *fuscata*, and more common species, plus *Periglypta puerpera* and *Telliina crucigera*. The next two days produced more of the same except for another, dead *Naquetia vokesae*, the interesting bivalve *Smarangia quadrangularis*, which has been described as a bivalve disguised as rubble, *Gari maculosa*, and *Anadara rugifera*.

Our last dive was a night fluorescent dive with \$600 dive lights and a plastic shield over our dive masks. Each species of coral glowed with colors ranging from white, to yellow, to reds, to magenta. It was almost impossible to spot shells but we did find a *Murex ramosus* and a large *Cassis cornuta* by dimly seeing the outline in the sand. The shells did not fluoresce but the chitonous operculums glowed bright yellow. Silvard and I each saw a small, bright pink glow in the sand and found the only mollusk species to fluoresce, the bubble shell *Acteon variegatus*. One afternoon while watching Silvard clean shells on our porch in Madagascar, I saw the leaves shake in the mango tree beside our bungalow. We got a good close up look at two large lemurs.

I could not get a complete list of Silvard's shells as he is on an around the world shelling trip for a year, but he found some *Cymatiums* I did not find, a *Malea pomum*, some large chitons, many *Nassarius* that he collected for his dad (a world authority on the family), and the aforementioned beautiful *Cypraea lamarckii*.

A high and dry shell exhibit

Mike Sanchez



Nearly 500 miles from the nearest sea and at least 80 million years since it last had a coastline, New Mexico, is among the last places you would expect to find a permanent exhibit on seashells. With a visit to the New Mexico Museum of Natural History and Science (NMMNH&S) in Albuquerque, however, that is exactly what you will find.

So how does a museum better known for dinosaurs wind up with an exhibit on mollusks? The story begins with Mr. Alfred J. Ostheimer III, a Philadelphia business man and amateur, if not influential, malacologist, and his wife, Jacquenette. Jacque recently described how Dr. Henry Pilsbry “laughed at the Ostheimers picking up beach specimens and had suggested he seriously collect live specimens for study.” And serious he became. Jacque continues that “he [Alfred] began to collect under the auspices of Dr. Pilsbry.” Mr. Ostheimer went on to found the Pilsbry Chair of Malacology, of which he also served as the president of the board, and established the *Natural Science Foundation of Philadelphia*. In 1959 he launched and helped finance the journal *Indo-Pacific Mollusca*, where he also served on the business board.

Alfred and Jacque’s interest led them far afield. They took their yacht, the 86 ton, 107-foot-long *Gloria Maris* on numerous collecting expeditions to the South Pacific and the West Indies for the Academy of Natural Science of Philadelphia. “Many places we went to collect shells didn’t have any accommodations whatsoever, so the *Gloria Maris* was our floating hotel.” Specimens gathered from these trips are currently housed in Philadelphia and also became part of scientific collections in nations that hosted expeditions. He amassed a very large personal collection as well.

After having lived in Philadelphia and Hawaii, Alfred and Jacque settled in Santa Fe in a house they bought in 1976. Around that time, they became aware of a push to create a natural history museum for the state of New Mexico.

The New Mexico Museum of Natural History and Science (NMMNH&S) in Albuquerque is located in an area called “Old Town,” the historic original site formally established in 1706 by Spain’s New Mexico governor Francisco Cuervo y Valdés. Aside from numerous centuries-old adobe structures, there are restaurants, shops, galleries, and museums.

After Alfred’s passing, Jacque donated the bulk of his shell collection to the NMMNH&S, whose doors opened to the public in 1986.

Jacque’s desire was to allow children who had never had a chance to visit the ocean to get a glimpse of some of its wonders. She says: “Born in Oklahoma, long before easy travel to the sea...I felt the urge to have a collection of ‘objet de mare’ available to children of the inland western U.S.A.” With this in mind, in 2014, she donated funds to the Museum to assemble a permanent shell exhibit.

Dr. Ayesha Burdett, Bioscience Curator at the NMMNH&S, pulled together a team to begin the process of building an exhibit. Patricia Gegick (Bioscience Collection Manager at the Museum), Tom Eichhorst (editor of *The American Conchologist*), Noel Chilton (a Museum Studies intern), and I (representing the Education Department) were asked to be involved in the selection of shells, to begin writing text, and to come up with ideas on how we would like to exhibit the shells.

As curator of the exhibit, Ayesha’s job was to organize meetings, assign tasks, set deadlines, approve content, theme, and text, make money available to purchase those supplies needed to complete the project...and the list goes on and on...

The first job was to select representative shells from the Ostheimer collection — no easy task due to its size and diversity of content. Our team pored over the collection, and began to pull specimens that were beautiful, rare, strange, or of scientific interest.



A view of a portion of the museum's collection of biological specimens. Cabinets on both sides of this aisle contain specimens from the Ostheimer collection.



A closer look at how the Ostheimer shell collection is sorted and stored. The pulled cabinets on the left contain fasciariids, the cabinet to the right, cones.



Models of common ancestors produced by Pedro Toledo.



(Above): Stands and metal frames under construction.



(Left): Carving a foam base for small shell display support.

Dozens of gastropods, including cowries, whelks, cones, and harps, were drawn. A nice sampling of bivalves including scallops, cockles, watering pots, and mussels (to name a few) were added. Argonauts and nautilus were chosen from the cephalopods. The great elephant tusk was selected as one representative of the class Scaphopoda, and an interesting array of chitons (class Polyplacophora) were added to help round out the collection. In total, close to 200 species were assembled. From among the gastropods, there is one of note: a small limpet (less than 25 mm) named *Octomarginula ostheimerae* (Abbott, 1958)*.

A collections manager's job is never done and keeping up with nomenclature can be a challenge — what was *Strombus* one day is *Lobatus* the next. Not surprisingly, as Patti worked her way through specimens that were to be exhibited, she found names that could not be verified in the World Registry of Marine Species (WoRMS). Old names would often pop up as a synonym, but tracking down a species whose name was both obsolete and misspelled led to a special kind of frustration. Luckily, Patti did have a couple of “aces up her sleeve”: call in encyclopedias Tom Eichhorst and Bruce Neville (co-author of *The Wentletrap Book, Guide to the Recent Epitoniidae of the World*)! Between the two of them, they were able to track down all of our rogue species.

Once specimens were gathered, the work of organizing a collection into an exhibit could begin. What was now needed was a theme — the “take away” concept that would serve as the educational framework for our exhibit. After considering a number of ideas, our team settled on arranging the shells on a phylogenetic tree.

Phylogenetics is the study of how organisms are related to one another. These relationships can be graphically represented as a tree with organisms closer to the base ancestral to the ones at the tips of the branches. Think of your own “family tree” where branch tips represent you, your siblings, and your cousins. These branches join at parent, aunts and uncles, which further join at grandparents, and so on. The farther apart the branches, the more distantly related the organisms being compared.

Confronted with numerous models for molluscan phylogeny, we asked Dr. Barry Kues, an invertebrate paleontologist (retired) from the University of New Mexico (UNM), for assistance. Dr. Kues recommended we use the Cyrtosoma/Diasoma model proposed by Runnegar and Pojeta in 1974, where clams and scaphopods (Diasoma) are on one branch of the tree and gastropods and cephalopods (Cyrtosoma) are on another. Chitons split from the group

early, and the worm-like aplacophorans are close to the common ancestor of the entire mollusk group.

Armed with this data, our team was able to produce a tree that resembled a gorgonian — a design that both demonstrated phylogeny and went well with the (mostly) marine shells used for our exhibit. For the most part we resolved our tree to the superfamily and family levels; in a few cases we had to stop at order, and with chitons and scaphopods, we only went to class. We tried to keep our tree accurate without becoming too heavily branched and confusing.

As we developed the theme, it became obvious that some shells needed to tell a more complete story were missing from the Ostheimer Collection. To compensate, some shells were purchased, others donated to the cause by Tom Eichhorst, and yet others were drawn from a collection donated to the Museum by a volunteer, Mr. Ken Hueter.

Christine Ellison and her crew from the Exhibits Department were involved in the process of developing the exhibit from inception to completion, but their involvement increased as content (text written, specimens selected, etc.) was finalized. For any exhibit, including ours, it is essential that space be allocated, fonts chosen, text panels designed, colors selected, and structures to house the exhibit be built; all of which happens under the purview of Exhibits.

It was at this point we realized it would be interesting to have models of the common ancestors of the many classes of mollusks. Chris assigned the task of bringing to life frequently millimeter-sized fossils to Pedro Toledo, one of our multi-talented exhibits department staff. Pedro studied the literature and examined photographs, then carefully sculpted models from clay. Each model was then molded, cast in resin, and painted. The resulting models are both stand-ins for the often minuscule fossils and also amazing works of art.

Chris also gave the job of designing supports for every shell that was to go on exhibit to Pedro. Ayesha tasked a (willing!) student volunteer with carefully weighing and measuring each and every shell and building a data set so that Pedro could have a checklist from which to work.

Not unexpectedly, as the numerous facets of our exhibit began to crystallize, the original concept of a vertical exhibit with shells arranged like leaves on a tree began to look less and less practical. A horizontal exhibit in a series of cases was selected instead. Each case would contain a molluscan class, and the phylogenetic tree would be used as a key to content. An e-tablet was also incorporated where

*Interestingly, after naming *Emarginula* (now *Octomarginula*) *ostheimerae* in 1958, Abbott decided this small fissurellid was a juvenile *Hemitoma emarginata* (Blainville, 1825) (now *Montfortia emarginata*) and so stated in his 1974 tome, *American Seashells* (2nd ed.). The two species are extremely similar, but James McLean reinstated *Octomarginula ostheimerae* in a 2011 monograph and this action is supported today by the World Register of Marine Species (WoRMS) and MolluscaBase (2019) – separating the two species in different genera. The shell on the left is *Octomarginula ostheimerae* (about 14mm) and the shell on the right is *Montfortia emarginata* (about 20mm). Time to check your Florida and Caribbean fissurellids.





A foam ridge matching the aperture of this tiger cowry will prevent it from slipping off its stand.



An assortment of the ever popular cowries. Sand surrounding the shells is pure calcium carbonate (the same material the shells are made of) as substrates even slightly acidic or abrasive could damage the shells. Additionally, the shells are illuminated with LEDs and shielded from sunlight to address concerns over exposure to UV.



A *Catalina forreri*, *Austrotrophon catalinensis*, (Oldroyd, I.S., 1927). This shell is now nearly unobtainable. Visitors can enter the number associated with each shell to find more detailed information about that particular species (scientific name, common name, range, etc).



Lindsey, Jenica, Janet, Brian (the Museum's registrar), and Alexis (a UNM work-study student) installing shells.



(Above): The completed exhibit. Gastropods are exhibited to the left in the largest case, the central case contains Pedro's models, cephalopods, scaphopods, and chitons, and in the far right case, bivalves. Notice that the colors of the branches on the family tree match the label frames on each case: blue - gastropods; green - cephalopods, scaphopods, and chitons; and orange - bivalves.

(Below): A portion of the gastropod case.



4. **Cones** are a vast group of tropical snails known for their simple, cone-shaped shells. All have fascinating "heads." The ring of some fish-eating species can be lethal to humans.

5. **Angler Shells** are sand-dwelling tropical snails. All are carnivorous, some feed on clams that they paralyze with the sting of a venomous harpoon-shaped radular tooth.

6. **Turkeys** are tropical snails that frequently have colorful shells and a prominent band. They are

7. **Whelks** are terrestrial snails found in all climates but there are freshwater species as well. Whelks are attracted to the smell of dead fish, making them easy to bait and catch.

8. **Helmet Shells** are common, often feeding on sea anemones and coral reefs. Many members have a warty appearance, giving them their common name.

9. **Fig Shells** are common water snails that live on rocky shores and coral reefs. Many members have a warty appearance, giving them their common name.

10. **Fig Shells** use a large foot and a mantle that covers the shell. They are found in tropical waters where they eat sea anemones and coral shells.

11. **Whelks** are highly prized by collectors for their beauty and structure. Most species are found in shallow tropical seas, but there are a few polar and deep-sea species.

12. **Whelks** are true to their name, most have white,

13. **Turkeys** have thin, yet strong, large shells. They live on sand in shallow tropical waters where, at night, they bury themselves in sand during the day.

14. **and 15. Egg** and **Venus Shells** are tropical snails that live on sea algae and sea fans. They are related to the conches and all have a mantle (the shell-producing organ) covering the outside of their shells.

16. **Conches** are well known for their colorful, highly

17. **Polka Dot** are closely related to the blue turkeys. Most species are common to Caribbean waters, like the San Juan Basin in northern New Mexico.

18. **Through** **Vendure** shells do not have the mantle, they have a mantle that is completely gone and a strong foot used to dig, rather than glide, across the sea floor.

19. **Turkeys** are found in deep tropical waters of the Indian and Pacific oceans. They are often found

20. **and 21.** are all of the same

22. **Turkeys** with sea

23. **Some**



Pedro Toledo's models in their case. Some are magnified by as much as x85.

more detailed information could be presented. Visitors can enter the number associated with individual specimens to pull up associated data like common and scientific names, habitat, etc.

With an increase in work pace, additional staff from exhibits was brought into the fold: Dan Secrist was tasked with building the exhibit bases, and Pedro and Isaac Hawley worked to weld and paint frames to support the acrylic tops.

As with any project that has been in the pipeline for a while, the staff changes. Patti Gegick retired and passed the torch to Lindsey Frederick, who would pick up the duty of keeping track of specimens as they moved from collections, to temporary storage, to exhibits, and finally on display. Chris Ellison retired and passed her checklist to the new exhibits chief, Dave Lundy. To make matters even more difficult, Ayesha also retired from the museum, and her position was filled by Dr. Jason Malaney, who picked up her responsibilities. Luckily there was sufficient overlap in staff, and documentation was thorough enough that information was not lost.

Fortuitously, Lindsey was able to garner considerable help from Jenica Morgan-Smith, a graduate student working on her Master's Degree in Museum Studies at UNM. Jen helped usher the exhibit to completion as she got involved in exhibit planning, built the mounts used to showcase the shells, planned the creation of a kit that will be used in schools, re-edited text that was re-visited by Jason, and more.

On a side note, another interesting phenomenon often occurs with the preparation of an exhibit, particularly when it pertains to science: new studies will challenge "well established" paradigms. A perfect example of this phenomenon happened while doing research for this article, when I came across a paper describing the development of *Wirenia*, a modern aplacophoran. What Andreas Wanninger, Head of the Department of Integrative Zoology of the University of Vienna, and colleagues found was that *Wirenia* larvae are far more complex than the adults — they in fact look a lot like chitons! The implications are obvious: aplacophorans and chitons share a common ancestor, and therefore aplacophorans can't be close to the ancestors of the many lineages of mollusks! Fortunately, by having an e-tablet,



The bivalve case. Notice the yellow tags indicating their position on the family tree.

we could add this new tidbit of information without re-doing the entire exhibit!

As the final touches were added, to keep our community up-to-date on what is going on at the Museum, our Public Information Officer, Andrea Jacquin, wrote a press release announcing the new exhibit.

Finally, after innumerable hours of planning, of consulting, writing, editing and rewriting text, of purchasing materials, of sculpting, measuring, constructing, and marketing, installation could take place. And the results? See for yourself!

So, how does a museum better known for dinosaurs wind up with an exhibit on mollusks? In a *Nucula* (pun intended): it literally "takes a village". We start with a wonderful donor, gather a team of experts, designers, sculptors, educators, grad students, and builders — people who really know and enjoy what they do — and then allow them to make it happen!

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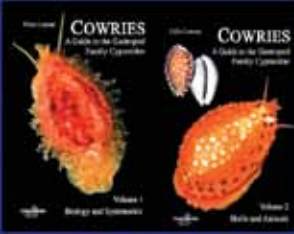
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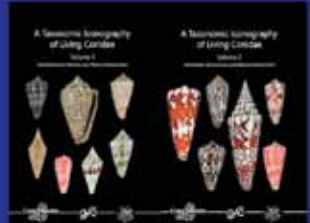
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Sea Shell Searchers Shell Show
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Quarterly Journal of the Conchologists of America, Inc.

Return to the future: COA 20/20 in Melbourne, Florida, June 15-22, 2020

Alan Gettleman

The Astronaut Trail Shell Club is in high gear for the upcoming 'Return to the Future: COA 20/20 in Melbourne, Florida, June 15-22, 2020.' Please see the Conchologist of America (COA) website (<https://conchologistsofamerica.org/>) for the latest information on the convention.

Calling all space cadets, alien invasion creatures (not the snail kind), and junior or senior astronauts: NASA at the Kennedy Space Center is nearing taking astronauts again to return human spaceflight back to the Moon, Mars, and beyond. Help celebrate our world's collective heritage in space flight at the welcome party. Come dressed as your favorite space cadet, alien, or astronaut. Real shell prizes (we could not get Moon rocks for prizes) for the best dressed in each category, and maybe a surprise.

This address or that? The initial convention registration form printed in the December *American Conchologist* had the wrong post office box. The post office has been forwarding applications to the correct box number. Fortunately, the first P.O. box became available, and now we have TWO post office boxes to serve you better. Mail your application (available on the COA website or in the December 2019 *American Conchologist*) and payment to Marsha Kirtley, Registrar, PO Box 540843 OR PO Box 540873, Merritt Island, Fl 32954 U.S. If your convention application was returned to you, we apologize, and please resend to either box number. If you have already sent in a reservation and do not get an electronic confirmation of your entry after twenty days, please contact the registrar.

Some elegant raffle items. The COA is fortunate to have received several fantastic sailor's valentines lovingly created by the late Deborah (Debbie) Freeman of Venice. Debbie was a former Secretary of the COA. A special raffle item will be an octagonal sailor's valentine on a pedestal. The dimensions are octagonal width 20 inches, height of octagonal box 3 inches, total height with stand 30 inches. The photographs do not do justice to the beauty of this item. We may have more than one sailor's valentine at the convention.



Another special raffle item is a shell necklace with the rare and attractive *Punctateon eloisae* (Abbott, 1973). The shell was collected by Dr. Don and Eloise Bosch in Oman. The Bosches were members of the North Carolina Shell Club who donated the shell to our convention. These and other uncommon items will be available at the raffle.

We have a nice collection of recent books in pristine condition donated by Homer Rhode of Englewood and also Carolyn and Earl Petrikin of St. Pete, which will be on a special silent auction. A listing of the offerings is on the COA website. You have to be registered at the convention to bid.

Shell clubs have the opportunity to have a club table to provide information about their club or to have shell pins and other items to help support their clubs. The host club will have items from a large collection of shells collected from the 1940's to the 1980's with proceeds going to the Astronaut Trail Shell Club scholarship fund and to the COA.

We thank those who have contributed items to the COA. We are still in need for the very special shell items for the always fantastic oral auction. If you have special outstanding items, please contact the Oral Auction Chair, Dave Green at dgreen2@entouch.net

Although you will want to explore the many attractions in the Space Coast area, note that all convention activities in the hotel are conveniently in one area on the first floor.

So, from the depths of the deepest oceans, to the farthest regions of the Solar System, find it all at the COA 20/20 Convention. Live long and prosper!



Sailor's valentine created by the late Deborah (Debbie) Freeman of Venice, Florida. The table is 30 inches high and 20 inches wide. An exquisite and certain to be popular raffle prize.

SAVE THE DATE FOR COA CONVENTION 2020:

RETURN TO THE FUTURE
OF RETURN TO HUMAN SPACE FLIGHT
AND THE COA TO THE SPACE COAST OF FLORIDA



Field Trips June 15-16, 2020

- June 17 Programs, Silent Auctions, Reception
- June 18 Programs, Silent & Oral Auction
- June 19 Programs, Silent Auctions, Banquet
- June 20-21 World Famous Bourse

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Contacts: Alan Gettleman: Lychee@cfl.rr.com
 Phyllis Gray: Phyllisgray98@gmail.com



Another very special raffle item is a shell necklace with the rare and attractive *Punctateon eloisae* (Abbott, 1973). The shell was collected by Dr. Don and Eloise Bosch in Oman, and is, of course, named after Eloise.

COA 20/20 RETURN TO THE FUTURE HOTEL RESERVATION INFORMATION

**HILTON MELBOURNE, 200 Rialto Place, Melbourne, FL 32901
(321) 768-0200
Website: www.hiltonmelbourne.com**

Group Reservation Code: COA20

Convention Schedule: **Fieldtrips Mon-Tues June 15-16, 2020**
 Convention begins 1pm Wednesday, June 17
 Welcome Party Wednesday, June 17
 Oral Auction, Thursday, June 18
 Banquet, Friday, June 19
 Bourse, Saturday, June 20 1pm-8pm
 Bourse, Sunday, June 21 9am-2pm

Room Daily Rates: Standard \$125.00
Executive Standard \$155.00 (includes upper floor breakfast & reception)
Junior Suite \$145.00
Executive Junior Suite \$175.00 (includes upper floor, breakfast & reception)

Rate plus 12% tax. Double occupancy. Extra person: \$10 per person
Group rate applies two days prior and after COA (Jun 13-Jun23)
Cutoff date for convention rate: MAY 16, 2020

Hotel offers complimentary shuttle to the **Melbourne Orlando Airport** (MLB), free parking and internet, gym, tennis court, outdoor pool & spa.

NOTE THERE IS NO COMPLIMENTARY SHUTTLE FROM THE ORLANDO INTERNATIONAL AIRPORT (MCO) WHICH IS 61 MILES FROM THE HOTEL.





Cyphoma aureocinctum (Dall, 1889), a remarkable find on a Louisiana beach

Emilio F. García

Louisiana has rather unremarkable beaches and in many cases people go to them to fish, rather than bathe; however, some beaches like Grand Isle, are sufficiently sandy for the latter. Grand Isle, as well as Elmer's Island, its neighbor to the west, has suffered deterioration from the many hurricanes that seem to be mesmerized by our Louisiana coast.

Neither Grand Isle nor Elmer's Island are "real" islands; they are called so because they are more elevated than the surrounding marshes. Grand Isle is well populated, with numerous fishing camps, motels, etc. I only mention it because it will be easier to find on a map. Elmer's Island is a refuge, so it is a nice place to go fishing, birding or just camping. It also is where this story will take us.

Our club members are mostly "of a certain age", and many of us have "been there, done that" many times over. Now and then we do outings to the shore, but less and less do we do the "Sanibel stoop"; just lots of socializing, while now and then giving a second look to the more promising drift. I am talking about those of us who have been members for decades. I am not talking about Dottie Hartman.

Dottie is one of our newer members. She is vivacious, outgoing, and adventurous, and when she gets the itch she just picks up her camper and goes. It was during one of those inspirational moments, soon after hurricane Barry, when she got in her camper and went. To Elmer's Island, that is.

Hurricane Barry reached the coast of Louisiana in July 2019. Barry was a category 1 hurricane and made landfall just west of Elmer's Island, roughly situated at 29°24'N, 89°99'W. I didn't know Dottie had taken this trip until our October 2019 Club meeting in Baton Rouge. She usually brings some of her findings to the meetings, either to share them with the group or to find out what it is she found, so I was not surprised when she came to me and said "Emilio, what are these?" And my jaw dropped. It was a pair of *Cyphoma aureocinctum* (Dall, 1889). What?

Although a widely spread species, *Cyphoma aureocinctum* has never been reported from the Gulf of Mexico. Sombrero Light (in the Florida Keys) and off Havana, Cuba, are the nearest recorded localities, and those specimens were collected in some 128 meters (Rosenberg, 2009). In their monograph on Ovulidae, Lorenz & Fehse (2009:94) consider the species to be rare. They report a maximum size for the species of 27mm; however, the larger of the two specimens found in Louisiana measures 29.8mm. So, again, what's going on?

It is safe to assume that Hurricane Barry played a role in the findings, but I think there is something else going on. As I mentioned earlier, Elmer's island has been devastated by hurricanes, and a couple of years before Barry Elmer's Island Refuge received several million dollars from fines levied against British Petroleum and Transocean, owner of the Deepwater Horizon rig. The moneys were used to restore the beaches with roughly one million cubic yards of sand from a shoal 30 miles offshore; the sand was barged to the coast and pumped onto the beach. Probably all hurricane Barry did was uncover these specimens brought in by the barges

Perhaps we can do a little more rationalization as to why these ovulids ended up in this improbable location. In 2006 the R/V *Pelican* dredged a freshly dead specimen of *Phenacovolva piragua* (Dall, 1889) off Louisiana (28°02.51'N, 92°26.88'W) in 60-74 meters, and in 2011 a second specimen, this time alive, off Alabama (29°26.366'N, 87°34.311'W) in 70-80 meters (see García, 2011:7, fig. 8). *Phenacovolva piragua* had never been reported from the Gulf of Mexico before these two specimens were collected.

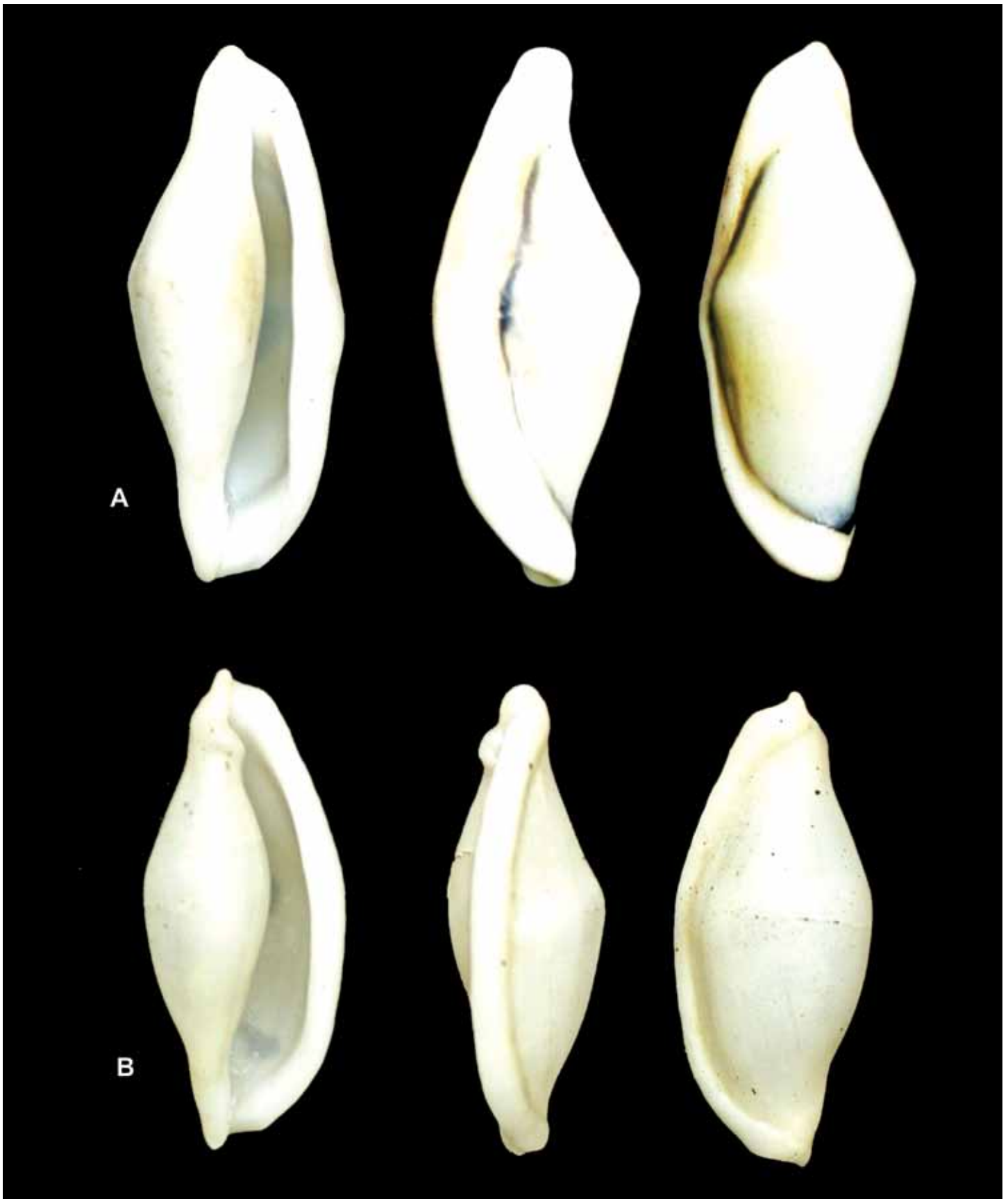
It is not far fetched to assume that if there is a habitat suitable for *P. piragua* east and west of Elmer's Island, *C. aureocinctum* should not feel out of place in that habitat; after all, it has been reported from as far as the Cape Verde Islands (Rosenberg, 2009). And so, Dottie's findings in Elmer's Island become less puzzling.

But don't pack your gear and rush to Elmer's Island. We have been there after the beach restoration and have been disappointed.

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Cyphoma aureocinctum (Dall, 1889), Elmer's Island, Jefferson Parish, Louisiana: A - 29.8mm; B - 24.5mm.

Molecular analysis of threatened species of the freshwater snail genus *Potamolithus* (Prosobranchia: Truncatelloidea: Tateidae) in the Río de la Plata, Argentina

Micaela de Lucía



Martín García Island (Province of Buenos Aires) is only 1.84 km² (0.71 sq. mi.) and has a permanent population of about 150. It is Argentine territory and a designated nature preserve (1973 treaty between Argentina and Uruguay). The island just north of Martín García is Timoteo Dominguez (Uruguay).

Molecular analyses were initiated from specimens of *Potamolithus* collected in January 2018 on Martín García Island (Province of Buenos Aires). The specimens were first separated into five morphs according to shell shape and coloration, from which a foot fragment fixed in absolute alcohol was prepared from each specimen. The total genomic DNA was extracted, by the CTAB method for 15 specimens and by commercial kit for 14 specimens. The partial sequence of the mitochondrial cytochrome *c* oxidase subunit I (COI) gene was amplified by primers following Folmer et al. (1994). The amplification by Polymerase Chain Reaction (PCR) was performed in a final volume of 50 μ l. The PCR products were purified using a Pure DNA-Clean Up kit (PB-L Bio-Logic Products) and the two DNA strands of the gene were directly sequenced in Macrogen Inc., Seoul, Korea. The resulting sequences were edited using the Chromas Lite and Bioedit software. They were then

trimmed to eliminate primers and consensus sequences were compared with reference sequences deposited in GenBank. Sequence alignment was performed with Clustal X 2.0.12 software, optimized by visual inspection, and edited with a word processor. The genetic distance was then analyzed using the Neighbor-Joining algorithm, through the MEGA X program, using the Hasegawa-Kishino-Yano model. The maximum likelihood analysis was performed using the MEGA X program using the Hasegawa-Kishino-Yano model. In total, 23 COI sequences were obtained, which would correspond to 5 entities: (1) entity 1 and 2 correspond to *P. agapetus* (8 sequences) and *P. buschii* (4 sequences), both species previously cited for Martín García Island and with registration of the COI gene in Genbank; (2) entity 3 corresponds anatomically with *P. bisinuatus* (7 sequences) –already mentioned for Martín García, the first sequences obtained for this species; (3) entity 4 may correspond to *P.*



A rocky, freshwater beach, *Potamolithus* habitat, Sitio de Muestreo, Casa de Bombas, Isla Martín García.

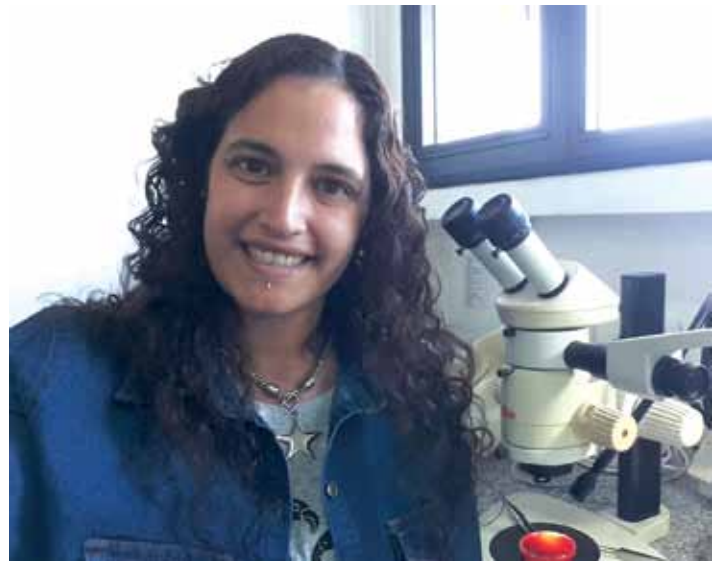


Adult *Potamolithus* on a rock from Sitio de Muestreo.

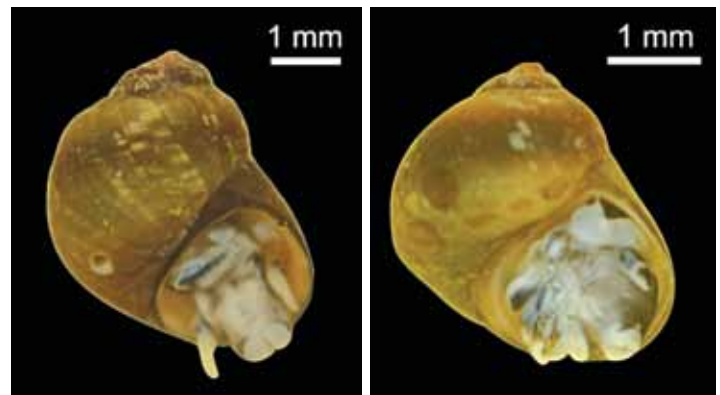
lapidum (3 sequences) – already mentioned for Martín García, the first sequences obtained for this species; entity 5 would not correspond to any *Potamolithus* species previously described for the IMG (1 sequence). Entities 4 and 5 have the shortest genetic distance (4.4%), while the greatest genetic distances were observed between *Potamolithus buschii* and entity 4 (10%) and between *Potamolithus agapetus* and entity 4 (10%).

Also, with the grant funds, the primers were purchased from Macrogen, Inc. for the mitochondrial genes 12S (Kocher et al. 1989) and 16S (Palumbi, 1996). The tests to tune the PCR of these genes were initiated. The partial results obtained here will be published in the 3CAM (Argentine Congress of Malacology), Bahía Blanca, December 2019.

Micaela de Lucía
c/o Agustina Zivano
Division Zoología Invertebrados, Museo de La Plata
Paseo del Bosque s/n
La Plata, Buenos Aires, Argentina
1900



The author and recipient of a COA grant, Micaela de Lucía



Two specimens of the very small *Potamolithus*. On the left is *P. agapetus* Pilsbry, 1911, and on the right is *P. buschii* (Frauenfeld, 1865). Difficulties of identification are readily apparent.

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Does stress come in cycles? Physiological performance of an invasive mussel

Christina Collins

Summary:

Thanks to the award from the Conchologists of America, I was able to measure the enzyme, cytosolic malate dehydrogenase (cMDH) as an indicator of anaerobic metabolism in the invasive mussel, *Mytilus galloprovincialis*. This funding allowed me to purchase the necessary reagents to complete this assay and made my research possible. This research has been presented at a national conference, Western Society of Naturalists in Tacoma, Washington, in November 2018, as well as at Faculty and Graduate Student Research Symposium at Sonoma State University in April 2019. Without this award, this research would not have been possible.

Material & Methods:

Study Site: My research investigated two populations of *M. galloprovincialis*; a subtidal site and an intertidal site; however, we focused solely on the subtidal site for this award. Mussels were collected off floating docks in Spud Point Marina, Bodega Bay, California (n=183) and were transported back to Sonoma State University, where they were held at 12°C (ambient seawater temperature at time of collection) for at least 48 hours prior to experimentation.

Cardiac Performance: Mussels (n=8 for each treatment) were outfitted with IR heart rate sensors and were placed into a heating chamber at acclimation temperature (12°C) and exposed to either submerged or aerial conditions. Mussel body temperature was then steadily increased by 4°C each hour from 8°C to 24°C (respective of thermal minimum and maximum for subtidal population) and heart rate measurements were taken at each hour in accordance with these temperatures (8, 12, 16, 20, and 24°C, for both aerial and submerged mussel treatments). An additional subset of mussels (n=5) were sacrificed at each temperature and adductor tissue was collected for the enzymatic analysis.

Enzyme Activity—cytosolic Malate Dehydrogenase (cMDH): Cytosolic malate dehydrogenase (cMDH) was isolated and purified from the adductor tissue using a modified protocol² from Dahlhoff & Somero. Enzyme activity was then measured on a microplate spectrophotometer at 15°C at a wavelength of 340nm.

Results:

Cardiac Performance Data: Mussel heart rate from the subtidal population (Bodega Bay, CA) was affected by temperature ($F_{1,147.4} = 10.03$, $p < 0.0001$; Fig. 1) but not by exposure to air ($F_{1,38.41} = 2.62$, $p = 0.1135$). Subtidal mussels in both treatments (submerged and aerial exposure) had higher heart rates at 8°C than between 16°C and 24°C. On

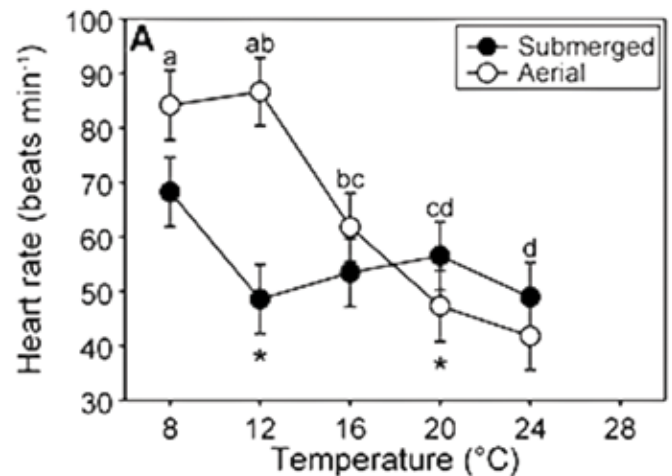


Fig. 1. Mussel heart rate as it relates to temperature both submerged and aerial.

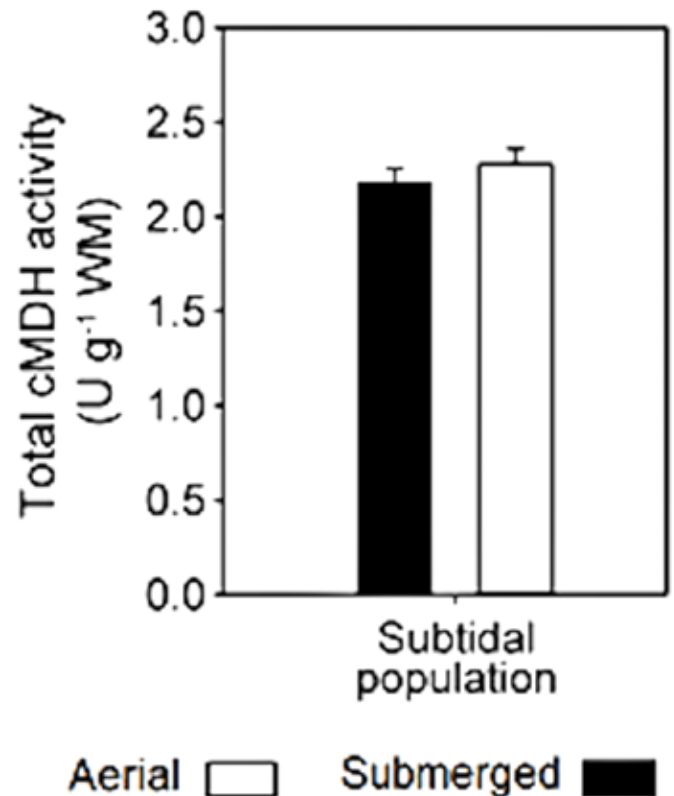


Fig. 2. Cytosolic malate dehydrogenase (cMDH) shows no real difference between aerial and submerged.



Mytilus galloprovincialis are farmed in many areas and the ease of interbreeding with other mussel species is a common concern. Image from Science Network WA, <https://phys.org/news/2014-06-interstate-mussel-populations-mingle-locals.html>

Mytilus galloprovincialis Lamarck, 1819, (the Mediterranean mussel) is one of three closely related ‘blue mussels,’ (*Mytilus galloprovincialis*, *Mytilus edulis* Linnaeus, 1758, and *Mytilus trossulus* Gould, 1850) that are invasive throughout much of the world. *Mytilus galloprovincialis* was introduced on the west coast of the U.S. in the 1900s. It is widely distributed on the temperate to subarctic coasts of both the Northern and Southern Hemispheres, where it is often the dominant intertidal inhabitant. It can grow to 140mm but is usually found at smaller sizes. This species is listed by the Invasive Species Specialist Group of the International Union for Conservation of Nature (IUCN) as one of the ‘100 worst invasive species’. Image from Wikipedia commons.



The three ‘blue mussel’ species: A. *Mytilus galloprovincialis*, B. *Mytilus edulis*, and C. *Mytilus trossulus*. All are wide-ranging and can interbreed with one another.

average, subtidal mussels from the submerged treatment had a decreased heart rate of 29% from 8°C to 24°C, while air exposed mussels had a 50% reduction in heart rate with respect to the same temperature range. There was, however, an interaction between temperature and treatment ($F_{4,147.4} = 6.20$, $p = 0.0001$).

cytosolic Malate Dehydrogenase (cMDH) Data: Temperature, treatment, and their interaction did not affect total cMDH activity in subtidal mussels ($F_{1,117} < 0.81$, $p > 0.37$; Fig. 2).

Discussion:

Cardiac Performance: Mussel heart rate decreased with increased temperature, contradictory to the general positive

relationship found between temperature and physiological performance⁴. Our data may indicate that these subtidal mussels are limited by predictable, cold temperatures, and therefore may indicate their lack of plasticity to respond to rapid temperature changes and inability to invade further north¹.

cytosolic Malate Dehydrogenase (cMDH): Subtidal mussels showed no effect of temperature or aerial emergence on cMDH activity, which may be due to metabolic depression caused by hypoxia in the aerially exposed mussels. Hypoxic depression is a passive response to minimize dependence on anaerobic metabolism³, which is energetically costly for such a low ATP turnout, and has been found to be a common response with substantial environmental changes⁵.

Literature cited:

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Christina Collins
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Department of Biology
Sonoma State University



**Barbara Plummer Boblitt "Bobbie" Houchin
(1926-2020)**

Bobbie was born July 16th, 1926, in Bardstown, Kentucky to the late Barbara Beam and Vella Boblitt. Her great grandfather, Jack Beam, was founder of Early Times Distillery in Bardstown.

She was a graduate of Nelson County High School and received her Associate of Arts Degree in June of 1946, from Columbia Christian College in Columbus, Missouri. She was a member of Phi Theta Kappa and participated on the synchronized swimming team.

She was full of curiosity and was always ready to learn something new. She graduated from the University of Louisville with a degree in finance at the age of 65. Then she continued to take classes for seniors at Bellarmine University.

Bobbie's talents and interests were many. She was an accomplished seamstress, piano player, and beloved wife, mother, grandmother, and community volunteer. She enjoyed bridge, arts and crafts, collecting rocks & minerals, native artifacts, and seashells, seashells, seashells! She was a long time member of the Conchologists of America, where she served as treasurer for several years.

Bobbie passed away peacefully on Saturday, February 22, 2020, in Evansville, Indiana. She was preceded in death by her loving husband, Earl Houchin Jr., her parents, and her brother, Jack Boblitt. Survivors include: daughter Lee Frances Houchin Sandefur (husband Jay) along with their children Barbara Timmons (husband Jordan), Jeremy Sandefur (wife Jamie); daughter Bruce Beam Houchin Bradley and her children David and Amanda Bradley.

In memoriam:

Bobbie Houchin (p. 36)
Fabio Moretzsohn (p. 37)
Charles L. Owen (p. 37)
Richard Sedlak (p. 38)
Hazel Walker (p. 39)





**Fabio Moretzsohn de Castro
(1964-2020)**

On January 6, 2020, the global malacological community lost a well-known professional at the peak of a very productive scientific and educational career. Dr. Fabio Moretzsohn passed away on Monday, January 6, 2020, of complications from lung cancer. Fabio received his B.S. in Biology in 1987, from the University of São Paulo, in Brazil, where he started his scientific career working under the advice of the influential bivalve biologist Osmar Domaneschi, to whom he credited his introduction to malacology.

In 1993, he accepted his M.S. in Biology from the University of the Ryukyus in Okinawa, Japan, and in 2003 was awarded his Ph.D. in Zoology from the University of Hawaii at Manoa, Hawaii, working under noted malacologist and environmentalist E. Alison Kay.

After receiving his Ph.D., Fabio was hired as an Assistant Invertebrate Zoologist at the Bishop Museum in Hawaii, and between 2004 and 2015 was a Postdoctoral Associate and Assistant Research Scientist at the Harte Institute for Gulf of Mexico Studies in Corpus Christi, Texas. At the Harte Institute, Fabio was instrumental in working with Geographical Information Systems (GIS), as it relates to the biodiversity mapping and conservation of the marine biota in the Gulf of Mexico. His expertise in online databases was reflected in his contributions as an editor of GulfBase.org, an online resource on environmental science education and research resources in the Gulf of Mexico region.

At the onset of his predicament, Fabio was a Professional Assistant Professor at Texas A&M University. An accomplished malacologist and author, among his many professional activities Fabio had been a Managing Editor for the *American Malacological Bulletin*, an editor for the family



Some of the books authored or co-authored by Fabio Moretzsohn.

Cypraeidae (the famous cowrie mollusks) for the World Registry of Marine Species (WoRMS), and an Academic Grants Committee member for Conchologists of America. Fabio was also a prolific author of reports, scientific articles, and books, including co-authorships with Wes Tunnell, Jr., Jean Andrews, and Noe Barrera in the *Encyclopedia of Texas Seashells* (2010) and with M.G. “Jerry” Harasewych in *The Book of Shells* (2011).

Fabio was a kind person, well-liked by his students, and a pleasure to work and be friends with, having a youthful quality that made everyone around him feel special. Fabio is survived by his wife Heather and two daughters.

José Leal, PhD, Science Director & Curator, Bailey-Matthews National Shell Museum, Sanibel, FL



Charles L. Owen (1933–2019) with wife, Mary

Charles L. Owen (Chuck) passed away October 17, 2019. Chuck, together with his wife Mary, who survives him, has been a long-time member of COA and the Chicago Shell Club. Born February 28, 1933, in Chicago, Chuck was a lifelong resident of the Chicago area. He studied chemistry, product design, city planning, and computer science and served five years in the U.S. Navy. He joined the faculty of the Illinois Institute of Technology (IIT) in

1965. He taught and did research at IIT until 2010, when he became Distinguished Professor Emeritus at IIT's Institute of Design. Over 150 publications authored and numerous honors received by him testify to his outstanding achievements in the field of design.

Chuck looked at shells with the eyes of a designer. That, in the famous words of Chicago architect Louis Sullivan 'form follows function', in shell architecture as well was obvious to Chuck. The often inexplicable beauty of shells in addition to their purely functional design, however, fascinated him even more.

The well-known March 1969, *National Geographic* article "The magic lure of sea shells," sparked Chuck's interest in shells. In the same year he, Mary, and a gaggle of their relatives, headed to Florida, to watch the moon launch of Apollo 11. After the launch the group spent time on Sanibel and a thorough investigation of the island's shells ensued. And that was it - Chuck and Mary were hooked. They joined the Chicago Shell Club (CSC) in 1970. Over the years both of them held a variety of CSC offices. As co-editors of *Thatcheria*, CSC's newsletter, they not only greatly improved on its appearance and content, but also contributed many articles, including Chuck's highly sophisticated "Evaluating dealers and deals" in the, alas, ultimate edition of the *Thatcheria* in 1996. The article devised a method to objectively compare the quality of shell dealers and their merchandise. It was very complex, used advanced math and went probably right over most readers' heads, but it was an example of the thoroughness applied by Chuck to whatever he tackled. He served as CSC President for several years in the 2000s.

As a design professor Chuck traveled the world giving lectures, judging design competitions and conducting research. There was always an opportunity to go on the quest for some interesting shells, as well. Chuck and Mary took up SCUBA diving in 1975. For many years they had aquaria where they kept live mollusks they collected. Since 1988, it was an annual ritual for Chuck and Mary to attend COA conventions. They often drove and combined COA with visits to fertile shelling grounds and other attractions. The bourse and auctions at the COA conventions were important sources for new material for their growing shell collection. Any shell obtained, be it self-collected, coming from COA or CSC events, or from mail-order dealers, was thoroughly researched by Chuck as for its correct identification. The shell was meticulously cleaned and its data entered into a database of Mary's and Chuck's own design. The shell was then labeled and securely tucked in a zip lock bag and a polystyrene box. As methodical as Chuck was in his professional life, so was he in his conchological pursuits. And he was a true man of letters. When a new shell book came out he would get it without fail.

Well over six feet tall, Chuck Owen was physically an imposing figure. Yet, he was mild-mannered and soft-spoken; the scholar and deep thinker always shone through. Chuck will be missed by his fellow Chicago Shell Club members and by conchologist friends around the world.

Jochen Gerber, PhD



Richard Sedlak (1949-2019)

The Broward Shell Club recently lost long time member Richard Sedlak. Richard served as Club President for seven years and was editor of the *Busycon* for more years than I can count, joining the club in about 1976. He was a tireless worker, chef at our club picnics, field trip organizer, raffle master, and newsletter editor. He wrote articles and drew little cartoons; if anything needed doing, he would do it. He was also a member of the local Orchid Society, Garden Club, and Bromeliad Society. Broward Shell Club is going to miss him greatly.

Carole Marshall

Richard also served as Chair of Pride South Florida for several terms and past President of Broward County Coalition for Human Rights. He took primary care of his aging father and two partners during their final illnesses. He had to slow down a bit due to illness in his last few years, but he always had a ready laugh and supportive attitude.



Richard had *Cyphoma sedlaki* Cate, 1976, a species he discovered in the Florida Keys named for him. Image from www.gastropods.com.



Hazel Walker (1921-2019)

The Jacksonville Shell (JSC) club lost its only remaining Honorary Life Member late last year. Hazel, a registered nurse, received her education at The Florida State School of Nursing and affiliated with Charity Hospital, New Orleans, Louisiana. She served as a U.S. Navy nurse in Norfolk and Portsmouth, VA, during the end of World War II. Hazel and her husband Alan [another JSC legend; see Lee, 2012], were married in Portsmouth during

the war, and then, when discharged, they spent 10 years in Providence, Rhode Island. This is where their two children, Alan and Lea were born. In 1955, they moved back to Florida and lived their remaining years in Jacksonville. Hazel spent much of her nursing career in hospitals in Jacksonville and last worked as Chief Nurse in Occupation Health for General Foods, Maxwell House Coffee. She retired in 1981.

Hazel was a member of the American Nurses Association, a founding member of Covenant Presbyterian Church in Jacksonville, and later a member of Lake Shore Presbyterian Church in Jacksonville, and a member of American Legion Post #137.

Hazel was preceded in death by her husband of 67 years, Alan Bowen Walker. She is survived by her son Alan Barrs Walker, daughter Lea Beth Walker Reeves and husband Jerry Reeves, and two grandsons, Jordan Ryan Reeves and Matthew Walker Reeves.

For nearly half a century Hazel Walker was an active supporter of our group, serving in many capacities. Her love of shells and artistic gift conspired to gain her renown as a crafter of various métiers, including the quintessential Sailor's Valentine, a challenge daunting all but the most talented and perseverant. Along with Alan and the late Gertrude Moller, she won recognition at our shell show, particularly during the halcyon years of the event (1974-1980), which were chaired by Alan and/or Don Campbell and drawing crowds numbering in the thousands. Her work also won major awards throughout the state, including the premier venue, Sanibel.

Yet there were two JSC activities that I recall best characterized Hazel's (and Alan's; they were close to



Hazel Walker on the steps to rooms 202-203, at the Beachfront, Cedar Key, where she would prepare fresh hot seafood for the numerous hungry and cold shellers of the Jacksonville Shell Club.

inseparable): educational outreach and the nonpareil Cedar Key hospitality event. With the support of the JSC, the Walkers conducted several dozen elementary school (and a few other audiences) presentations to introduce youngsters to mollusks and shells. As first exemplified by Aristotle, they stressed the importance of the animal within the shell in understanding the true biological nature of what kids often misunderstood as lifeless artifacts on the beach. Teachers loved this special curricular enhancement and the hundreds of thank-you notes from them and their charges provide abiding testimony of appreciation.

The other uniquely Walkerian experience was their perennial seasonal hospitality at the Beachfront Motel, Cedar Key. Through an arcane collusion between terrestrial and astronomical phenomena, the lowest tides in that part of the land-seascape coincide closely with the coldest hours and days of the year. Back then (1970s-1980s) most of us could be found at work the Friday before the optimal weekend morning for shell collecting. That meant arriving by car after dark at a place with limited amenities, such as a restaurant. Not to worry, just head for room 202-203 where up to 20 shellers could find a hot seafood meal and the ultimate in fellowship and good cheer. Hazel and Allan ran a timely, enjoyable, and eminently memorable concession. RIP

Harry G. Lee

From *Shell-O-Gram* Jan-Feb 2020 Vol. 61 (no. 1) official publication of the Jacksonville Shell Club, Inc.

Lee, H.G. 2012. Allan Walker (1921-2012). *American Conchologist* 40(1): 39. March.

2020 Shell Shows and Related Events

Following information is subject to change. Please verify with individual organization. Also, please check the **COA Web page** for events: conchologistsofamerica.org

January 11-12, 2020

55th Annual Broward Shell Show, Pompano Beach, FL

Emma Lou Olson Civic Center, 1801 Northeast 6th Street

Alice Pace

Email: alicepace90@att.net

Tel: 305-301-1296

January 18-19, 2020

40th Space Coast Seashell Festival/Show, Melbourne, FL

(Astronaut Trail Shell Club)

Eau Gallie Civic Center, 1515 Highland Avenue

Alan Gettleman

Email: lychee@cfl.rr.com

Tel: 321-536-2896

February 7-9, 2020

57th Annual Sarasota Shell Show, Sarasota, FL

Potter Building at Roberts Arena, 2896 Ringling Blvd.

Donna Cassin

Email: dcassin9411@verizon.net

Tel: 941-362-3302

February 8-10, 2020

Bangkok Shell Show

Contact: Tom Rice

Email: ofseaandshore@gmail.com

February 15, 2020

Florida United Malacologists 11th Annual Meeting

Bailey-Matthews National Shell Museum, Sanibel FL

Contact: Jose Leal

Email: jleal@shellmuseum.org

February 21-22, 2020

73rd St. Petersburg Shell Show, Seminole, FL

Seminole Recreation Center, 9100 113th St. N

John Jacobs: Email: johncheryl@earthlink.net

Tel: 813-309-2608

March 5-7, 2020

83rd Sanibel Shell Show, Sanibel, FL

Sanibel Community Center, 2173 Periwinkle Way
Sanibel Island, Florida 33597

Joyce Matthys: email: joycematthys1@gmail.com

Tel: 503-871-1082

Mary Burton: email: marybsanibel@hotmail.com

Tel: 561-301-2971

Website: <https://sanibelshellclub.com>

~~March 19-21, 2020 (canceled)~~

40th Marco Island Shell Show, Marco Island, FL

United Church of Marco Island, 320 North Barfield

Contact: Jae Kellogg

Email: pjsailkw@gmail.com

Tel: 239-253-8483

~~April 3-5, 2020 (postponed until maybe Sep or Oct)~~

15th Australian National Shell Show

Gaythorne Bowls Club

18 Prospect Road, Gaythorne 4051

Queensland, Australia

Email: brisbaneshellclub@powerup.com.au

Website: <https://www.seqshells.com/nationalshellshow2020/>

Post: PO Box 78, Arana Hills, QLD 4054 Australia

Facebook: <https://www.facebook.com/groups/1434389403526873>

~~April 4-5, 2020 (postponed, date TBD)~~

32nd Paris International Shell Show

Centre Culturel, Place des Martyrs de Chateaubriant,
77500 Chelles (20 km de Paris)

Website: www.xenophora.org

~~April 14-29, 2020 (canceled)~~

Philippines Shell Convention

Marielle's Seashell Museum

San Juan, Siquijor

Contact: Mark Reekie

Email: seashelldude@gmail.com

Facebook: 2020 Philippines Seashell Convention

April 24-26, 2020 (under review)

2020 Texas Shellers' Jamboree

Jasmine Hall, 100 Narcissus St., Lake Jackson, TX

Thursday 1 pm – Sunday 1 pm

Contact: Houston Conchology Society

www.houstonshellclub.com

Lucy Clampit: lclampit@comcast.net

April 25, 2020 (under review)

22nd Mid-Atlantic Malacologists Meeting

Delaware Museum of Natural History

4840 Kennett Pike, Wilmington, Delaware 19807

Contacts: Alex Kittle: akittle@delmnh.org

Elizabeth Shea: eshea@delmnh.org

May 16-17, 2020 (under review)**30th Belgium International Shell Show**

Sporthal Kattenbroek, Kattenbroek 14
2650 Edegem, Belgium
Charles Krijnen, Burgemeester Jansenstraat 10,
NL-5037 NC Tilburg, Nederland
Email: bvc.shellshow@planet.nl
Tel: 31(13)463-0607
Website: www.knobvc.be/shellshow.php

May 29-31, 2020**Gulf Coast Shell Show, Panama City, FL**

Panama City Beach Senior Center, 423 Lyndell Lane
Jim Brunner
Email: jili1043@comcast.net
Tel: 805-215-2086

June 15-21, 2020**Conchologists of America Annual Convention, Melbourne, FL**

Hilton Melbourne, 200 Rialto Place, Melbourne, FL
www.HiltonMelbourne.com
Registration: Marsha Kirtley email: MarshaK07@gmail.com
Co-Chairs: Alan Gettleman, lychee@cfl.rr.com
Phyllis Gray, phyllisgray98@gmail.com
Website: conchologistsofamerica.com

July 3-5, 2020**Townsville Shell Show**

Orchid Society Hall in Charles Street, Kirwan
Townsville, Queensland, Australia
Contact: Jack Worsfold
Email: jnw_48@yahoo.com.au

July 11-13, 2020**53rd Keppel Bay Shell Club Shell Show, Yeppoon, Queensland, Australia**

Gus Moore Pavilion at the Yeppoon Show Ground
Jean M. Offord
Tel: 61 (7) 4928-3509
Email: keppelbayshellclub@bigpond.com

August 21-23, 2020**5th Annual West Coast Shell Show, San Diego, CA**

Casa Del Prado, Room 101, Balboa Park
David Berschauer
Tel: 949-457-9210
Email: shellcollection@hotmail.com
Website: sandiegoshellclub.com and Facebook

August 28-September 7, 2020**Oregon Shell Show**

Oregon State Fair & Exposition Center
2330 17th St., NE, Salem, OR 97301
Marici Reid
Tel: 408-891-5643
Email: marici@earthlink.net

October 9-11, 2020**Sea Shell Searchers Shell Show**

Lake Jackson Civic Center
333 Hwy 332
Lake Jackson, Texas 77566
Contact: Wanda Coker: 979-236-5274 email: empty-bobbin51@yahoo.com
Patty Humbird: 979-373-1247 email: phumbird@earthlink.net

October 24, 2020**40th Annual Sydney Shell Show**

Ryde Eastwood Leagues Club, Ryedale Room,
117 Ryedale Road, West Ryde, Sydney, Australia
11:00 am to 4:00 pm
Contact: Steve Dean
Tel: 0411751185
Email: steve@easy.com.au

October 24, 2020**British Shell Collector's Club Convention/Shell Show**

Theydon Bois Village Hall, Theydon Bois, Essex
CM 16 7ER Coppice Row (the B172)
Debbie Rolfe
Tel: 44-01474-567827
Email: debzr58@gmail.com
Website: britishshellclub.org

*Information Source: **Vicky Wall**, COA Awards Director, 303 Wall Road, Mayodan, NC 27027, USA E-mail: vwallsheller@gmail.com Tel: 336-348-3260

Sanibel-Captiva Shell Club establishes the Sanibel-Captiva Award as part of the COA endowment fund



A \$1,000 installment check from the Sanibel-Captiva Shell Club for their total of a \$10,000 donation to COA for the Sanibel-Captiva Award. This donation will further enrich COA's endowment fund and is very welcome. Receiving the check from the Sanibel-Captiva Shell Club Grants Committee on behalf of COA is Donald Dan (left). Grants Committee members, left to right, are: Joe Timko, Clair Beckmann and Tom Annesley.

The Sanibel-Captiva Shell Club meets from 1:30pm to 3:00pm on the second Sunday of the month, October through April, at the Sanibel Community House, 2173 Periwinkle Way, Sanibel, FL. Details can be found at: <https://sanibelshellclub.com>. The club has a long and rich history. As this issue of *American Conchologist* is being printed they are holding their 83rd annual shell show (5-7 March 2020). Club meetings begin with a silent auction and include presentations by amateurs as well as professionals. The club also sponsors local field trips. You do not have to be a shell expert to be welcomed at these meetings. The following is a quote from the Sanibel-Captiva Shell Club web site:

"All the meetings of the Sanibel-Captiva Shell Club are open to the public. We welcome guests at all times! You don't have to be a serious shell collector to visit us or become a part of our club. All that is required is an interest in shells. Most of us began as beachcombers, not knowing one shell from another. Only a few of us have had a formal education in conchology or malacology. Instead, we have learned from the more experienced members of our club and the professional staff at The Bailey-Matthews Shell Museum. We all enjoy sharing information and collecting experiences."



Astronaut Trail Shell Club Festival Shell Show

January 18-19, 2020



The Astronaut Trail Shell Club Festival Shell Show was held January 18-19, 2020, with John Slapcinsky of the Florida Museum of Natural History in Gainesville, Florida, and Don Pisor of San Diego, California, as the Scientific Judges. Both Don and Jeanne Pisor attended the show and are charter year members of our club (1966) when Don worked for the U.S. Space Program. The Artistic Judge was Linda Green of Missouri City, Texas. The winning scientific award winners were:

Master's Award: Vicky Wall, Mayodan, North Carolina: "In my Mind I'm Shelling Carolina."

Conchologists of America (COA) Award: Duane Kauffman, Goshen, Indiana: "Student Identification Key for Miniatures & Micros."

duPont Award: Karlynn Morgan, Winston-Salem, North Carolina: "Representatives of the Family Epitoniidae."

R. Tucker Abbott Award (Best Self Collected Exhibit): Vicky Wall, Mayodan, North Carolina: "Hawaii-Self Collected Shells."

Self-Collected Shell of Show: Gene Everson, Louisville, Kentucky: *Vullietoliva foxi* (Stingley, 1984).

Best Florida Self Collected Shell of Show: Nancy Galdo, Ormond Beach, Florida: *Lithopoma phoebium* (Roding, 1798).

Shell of the Show: Greg Curry Sr., Key West, Florida: *Cymbiola innexa* (Reeve, 1849).

Judges Commendation Ribbons: Anne Joffe, Sanibel, Florida: "Man's Trash is an Oyster's Treasure" and Gene Everson, Louisville, Kentucky: "Shells of the East Pacific."

Winning artistic awards:

Arts & Crafts Award (Made by Exhibitor): Lisa Baryschpolec, Melbourne, Florida: «Mermaid Under Glass.»

Arts & Crafts Award (Collectible not made by exhibitor): Lisa Baryschpolec, Melbourne, Florida: framed picture with polished freshwater clam for base (also Judges Commendation Ribbon).

Judges Commendation Ribbon: Lisa Baryschpolec, Melbourne, Florida: pearlized wreath.

Thank you to all who exhibited, and those who attended the show. We invite all to attend the Conchologists of America (COA) 20/20 Convention also located in Melbourne, Florida, June 15-22, 2020, at the Hilton Rialto Hotel, Rialto Avenue, Melbourne, Florida.



COA Award presented by John Slapcinsky to Duane Kauffman for "Student Identification Key for Miniatures & Micros," with 6 cases spanning 14 feet and displaying 96 molluscan species under 10mm.



The DuPont Award: Karlynn Morgan.



Master's Award: Vicky Wall

Broward Shell Show January 11-12, 2020



Vicky Wall won the COA Award with her entry: "Self-collected Shells From Hawaii." She displayed 57 species of marine and land shells in 5 cases spread over 14 feet.



Nancy Galdo won both "Shell of Show (any manner – an abnormal *Cypraea cervus* L., 1758) and (self-collected – *Lithopoma phoebium* Röding, 1798).



"Best of the Best" & Len Hill Award: Gene Everson.



American Museum of Natural History: Kenneth Brown.



The DuPont Award: Gregory Curry Sr.



Judges (L to R): John Jacobs (sci.), Anne Joffe (sci.), Emily Savage (art.) and Jae Kellogg (art.).

Sarasota Shell Club's 57th Annual Shell Show February 7-9, 2020



The Sarasota Shell Club held its annual shell show at the Potter Building in Sarasota, Florida. As usual there were many exciting exhibits and a good crowd to enjoy them. The scientific judges were Gary Schmelz and Alan Gettleman. The COA trophy was won by Greg Curry for his extensive collection and entry of the Genus *Melo*. The DuPont award was given to Bob & Pat Linn for "Abalones from Around the World." The Mote Gold award was given to Ron Bopp for his cone shell display. The Hertweck fossil plaque was awarded to June Bailey for her museum-quality Madagascar fossil cluster. Duane Kauffmann won both the Best Small Scientific Exhibit and the Best Self-Collected Exhibit plaques for his "Malacocrusin" display of miniature shell collecting while cruise ship traveling." Lynn Gaulin won the Sarasota Shell Club Member's Award for her educational "The Secret Code of Patterns." Other awards included the Most Unusual Shell Plaque, given to Greg Curry for his *Melo broderipil* and a Judges Special Ribbon to both Ron Bopp and Linda Greiner. Greg Curry won the Fossil Shell of the Show for his *Melo umbilicatus*.



COA trophy was won by Greg Curry for his extensive collection and entry of the Genus *Melo*.



DuPont award was given to Bob & Pat Linn for "Abalones from Around the World."



Hertweck fossil plaque was awarded to June Bailey for her museum-quality Madagascar fossil cluster.



The Hispaniolan *Abbottella moreletiana* complex



The *Abbottella moreletiana* complex in Hispaniola was well-explored by G. Thomas Watters (2016) and his work is well illustrated in this issue of *American Conchologist* by Simon Aiken (p. 6). Simon is responsible for the front cover photograph of *Abbottella moreletiana* as well as the one above showing differences in the three very similar shells of this complex. From left to right are: *Abbottella crataegus* Watters, 2016; *Abbottella domingoensis* Bartsch, 1946; and *Abbottella moreletiana* (Crosse, 1873). All are from Hispaniola and have extremely limited and inaccessible habitats (see “Front cover” on p. 3). Of the approximately two dozen species in this genus, all but one are found on the island of Hispaniola – divided between Haiti in the west and the Dominican Republic in the east. Tom Watters authored or coauthored about half of these. The single outlier is *Abbottella decolorata* (Pfeiffer, 1859), which is found in extreme eastern Cuba (Guantánamo). According to Watters (2013), the genus *Abbottella* is a monophyletic group distinct from the rest of the Annulariidae. The genus was first described by Henderson and Bartsch in 1920 with eight species. Representatives of all Hispaniolan *Abbottella* could be easily kept in a single match box or pill bottle.

Henderson J.B. & P. Bartsch. 1920. A classification of the American operculate land mollusks of the family Annulariidae. *Proceedings of the United States National Museum* 58: 49–82.

Watters, G.T. 2013. New taxa and distributional notes on *Abbottella* and related taxa (Gastropoda: Littorinoidea: Annulariidae). *Zootaxa* 3646: 1-22.

Watters, G.T. 2016. The *Abbottella moreletiana* complex in Hispaniola: distributional notes, a new species, and the recognition of a new subfamily (Annulariidae: Abbottellinae). *Journal of Conchology* 42: 111-117.

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