

Shell and Tell

The newsletter of the Gulf Coast Shell Club



Argopecten irradians concentricus (Say, 1822)

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President's Message



President
Phyllis Bernard

Every time Linda says it time for another newsletter I think where did those two months go? I blink and they are gone. So, before another two months are gone make time to go to a beach. Take time to take a walk in the sunshine and look for shells.

We are cautiously looking at having a show in the fall and resuming meetings in late summer. Look for details in this issue and share your thoughts.

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Welcome New Members!

Janet Sherrod
Cincinnati, OH

Nancy McMahon
Cincinnati OH

These two are sisters and were recruited by CJ Eubank. Welcome to our group and thanks, CJ!

Club Officers:

President - Phyllis Bernard
Vice President - Luke Cooley
Secretary -
Corresponding Secretary - D. J. Moore
Treasurer - Jim Brunner
Tides - Bill Horvath
Membership - Phyllis Bernard
Librarian - Gwen Lawrence
Raffle - Don Kittsmiller
Newsletter - Linda Brunner

The Beautiful Flag

Jim Brunner

Back in the 1970's, while stationed in North Carolina, we joined the state shell club. It was a neat club then and still is today. It holds four weekend meetings a year with three of them usually at some locale on the Outer Banks and the fourth reserved for their annual shell show. At one of these meetings a member (sorry but I can't recall the name) gave a talk on the family Mitridae - the miters, and an impressive talk it was. At the next meeting he brought a display of miters and they were dazzling - case after case of beauties. All the while I'm thinking, "I want to collect this family!"



Vexillum plicarium (Linnaeus, 1768)
Plaited Miter



Vexillum dennisoni (Reeve 1844)
Dennison's Miter



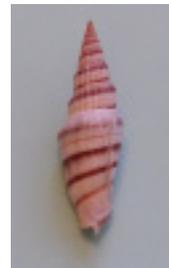
Left: *Vexillum citrinum* (Gmelin, 1791)
Regal Miter
Right: *Vexillum taeniatum* (Lamarck, 1811)
Ribboned Miter



Vexillum coccineum (Reeve 1844)
Scarlet Miter



Vexillum costatum (Gmelin, 1791)



Vexillum regina (Sowerby, 1828)
Queen Miter



Vexillum rugosum (Gmelin, 1791)
Rugose Miter

Finally I came to a case with perhaps 25 shells, each of which was totally different in coloration while having basically the same shape.

"What's that one?" I said.

"Oh, that's a Little Fox Miter" he said.

"And that one?" I said pointing to one with completely different colors.

"It is also a Little Fox Miter." was the reply.

And so it went over and over until it suddenly dawned upon me that I did not want to collect this family. How would I ever be able to tell one from another? The fact that this guy collected only miters should have been a warning in the first place.



Vexillum vulpecula (Linnaeus, 1768)
Little Fox Miter

Over the years we've been reasonably true to that pledge of miter abstinence. Today our collection contains just over 210 lots of "miter" shells. The miter is in parenthesis because the Mitridae has since been subdivided into two families - each large in its own respect.

Family Mitridae (one of the two) is divided into seven subfamilies and fifty-two nominate genera with at least 1,642 species¹ (with over 1,000 in the *Mitra* genus alone). It lies within the superfamily Mitroidea and retains the shells with the traditional miter morphological characteristics. (Morph = form, in this case the appearance of the shell rather than the animal)

Family Costellariidae is divided into two subfamilies with thirty-seven nominate genera and 1,090 species¹. Not only was it split off from the Mitridae family by R. W. Ponder in 1972 it was placed in an entirely different superfamily, that of Turbinelloidea, based on the anatomical characteristics of the animals. This places them closer to vases and pagoda shells than it does to miters.

The family we are interested in is the Costellariidae. Note the Latin stem word "costae" is ingrained and its meaning of "rib" indicates the primary characteristic of the family with almost all species containing, more or less, some degree of ribbing. Buried within the family but certainly dominating it is the genus *Vexillum*, which by itself has 839 nominate species. And that brings us to our second Latin lesson: *Vexillum* comes from the stem *vexilla*, or "little sails" and is associated with the bright cloth standards (or flags) carried by the Roman Legions. The vivid and varied colors of many of the members of this genus do indeed stand out in any setting.

The Costellariidae have a worldwide distribution in warm and temperate waters with a preference for sandy bottoms where their presence can be detected by the trails they leave. Most live in relatively shallow water at 4-40 feet. The deepest shells we have are from 180-190 feet. We actually have three members of the family in our local waters. *Vexillum hendersoni* (Dall, 1927), Henderson's Miter ranges from 10 to 25mm (about an inch) and has striking bands of white and light to dark orange. The second shell is *Vexillum (Pusia) sykesi*, The White-banded Miter, is smaller at 7-15mm and not nearly as pretty but still is easily recognizable as a miter. The third shell, *Vexillum epiphaneum* (Rehder, 1943), The Half-Brown Miter, reaches 30mm with a white top and a brown body whorl. We don't have one of these and if you do I would certainly like to look at it. Don't expect to find any of these if you are out snorkeling for the only examples found came from 90-110 feet. If you were especially lucky you might find one washed out at the shoreline of a renourished beach for the sand they pump in often comes from those depths.

If a picture is worth a thousand words then those above show both the glory and the despair associated with collecting miters.



Editor's note: These are photos of two *Vexillum sanguisugum* (Linnaeus, 1758), **Bloodsucker Miter**, *in situ* (pictures from on line). To further confuse us they appear very different but are the same species.

¹ Part of the fun of playing "Miter" is plowing through a seemingly endless list of synonyms (for the existing species) and fossil names (for the non-existent species) that boils 1,642 down to about 500 and 1,090 to about 475 actual species for you to collect.



Did You Know?



One of the earliest shell collections known contained a Jacobean scallop. This was unearthed at Pompeii in the ruins together with the Textile Cone and a pearl oyster from the Indian Ocean in what appears to be a natural history collection. It is entirely possible that this was the remains of the Natural History Society of Pompeii of which the distinguished naturalist, Pliny the Elder, was probably a member.

It was Pliny who first recorded the swimming methods of the scallop and he observed that it was able to dart above and skip along the surface of the water

Incidentally, scallops have 32 beautiful blue eyes that are similar in structure to human eyes but less sensitive.

To cut down on the offensive odor of boiling shells sprinkle some black pepper into the water.

Many rare and valuable shells can be found in the stomachs of deep water fish.

The Himalayan peaks, including Mt. Everest five miles above sea level, consist of marine limestone created by the shells of billions of tiny sea creatures!

From 1989 Jacksonville Shell Show Program, p. 9



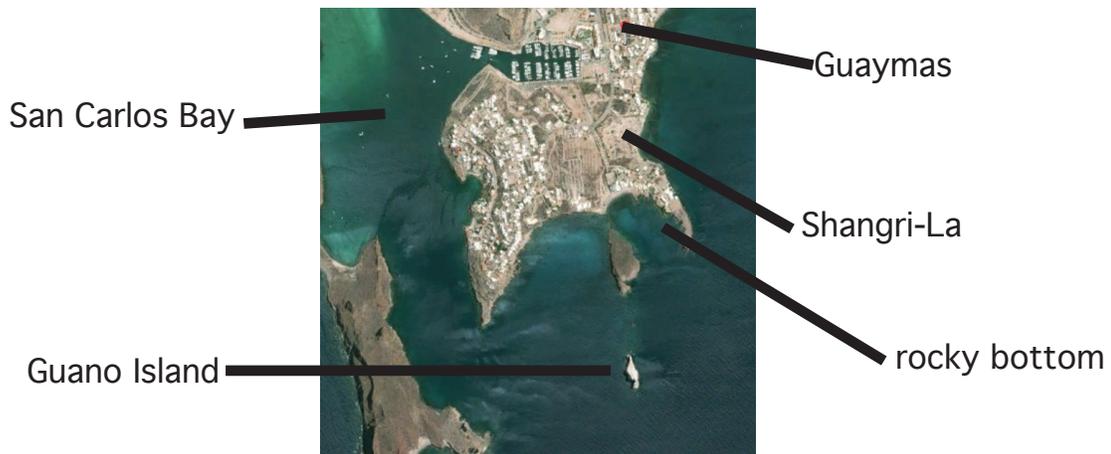
SEARCHING FOR SHANGRI-LA



According to references, “Shangri-La is a fictional place described in the 1933 novel **Lost Horizon** by British author James Hilton. Hilton describes Shangri-La as a mythical, harmonious valley, gently guided from a lamasery, enclosed in the western end of the Kunlun Mountains.” But, no, we had reservations and the place was real. Not only was that description wrong but our reservation was in Mexico, Guaymas to be exact. Bear in mind that this all took place in the late 20th Century. We have changed and I know that Guaymas has changed.

Six of us flew into Tuscon, AZ, had a good night’s sleep and boarded the plane the next morning for Guaymas and Shangri-La. Only one of us had been there before. One of us spoke Spanish but she was not a sheller, her husband was. We had two cars reserved at the airport. We got our cars and, equipped with local maps, were off to Shangri-La. We arrived at the spot but found no Shangri-La. We drove around the area for about an hour stopping to ask locals where it was and they kept directing us back to where we had previously gone. There was no sign and there were a few small houses and several travel trailers parked in a space that looked as if it was being destroyed or being rebuilt. We finally located a small house with a sign that said “Office”. We went into the building and, sure enough, we had finally found the place! Forget what James Hilton said. The place appeared to be none of that. We were given our keys and directions to our rentals, found them and unloaded.

The first thing we noted was that our houses were on the edge of a low cliff with steps leading down to the water. This was great when the tide was in but at peak low tide it was a challenge as the steps did not go all the way down to the shore. Shangri-La? We will make do. In the house four of us shared were two bedrooms, two bathrooms, a kitchen, living room and a spacious veranda overlooking the bay. We had everything we needed.



In three directions we had the soft blue-green of the sea with outcroppings of rock and the settlements of humans. The fourth direction brought us the stark landscape of the southern Sonora Desert with stunted plants and wind swept rock. In the above photo you can see that our Sangri-La is now brown scape waiting for new development but when we were there it was wonderful if not idyllic.

Aside from the shelling it was the first time I had seen a yellow bougainvillea, a bird nest in a cactus, euphorbia trees with bark and cacti used as fences. The habitats were diverse. In front of our house were huge coral heads where *Cypraea annettae*, *Turbo fluctuosus* and *Jenneria pustulata* lived. We also found the Pacific Lion’s Paw there and *Pinctada mazatlanica* (Pacific Pearl Oyster) around the boulders. In all we found 117 different species in 3 distinct habitats.

Shangri-La Point where our rentals were had two different habitats. There were the huge boulders mentioned above and around the corner were turnable rocks. Jim said he moved San Carlos Bay one rock at a time looking for shells. (Of course he replaced each one he lifted back to its original position.) On the rocky bottoms we found *Conus princeps*, *Conus purpurascens*, *Conus brunneus*, and three other cone species. And the list goes on. It was difficult to understand how some of the shells survived given the rocky bottom and the crashing waves. Several of the cones always had injuries so we were very selective.

Further around the point the bay became sandy and was home to a variety of different species especially bivalves. There we discovered *Megapitaria aurantiaca*, *M. squalida*, *Crucibulum spinosum*, *Tivela planulata* and, my first and only, *Tellina felix*. Aside from the Tellin the prize of the area had to be *Phalium centiquadrata* which, I think, would be the cognate of our Scotch Bonnet. Please bear in mind that this list contains just a few of the sand/mud dwellers of the area.



Phalium centiquadrata in tank before attack



Trivia sanguinea was shy. It never came out and crawled around like it's cousins.



Jenneria pustulata exploring the sides of the tank. You can see the mantle and underside of the foot easily.

The final habitat was a broad sandy beach at Empalme. Low tide was before sunrise so we drove there in darkness. It was desert and cold. Jim built a fire of dead plants on the beach because the temperature was around 40 degrees F. The rest of us walked very carefully along the beach using our flashlights for guidance. We needed the light to spot the half buried *Pitar lupanaria* whose needle sharp spines protruded from the clean sand. With the sunrise we began to find other treasure. We found stranded *Euvola vogdesi*, *Argopecten circularis*. (Currently there seems to be some controversy regarding this name. I have not been able to resolve it to my satisfaction so I will use this until I can.), *Leukoma grata* and *Agaronia testacea*, Panama False Olive. The latter species proved to be a bit of a problem.

Two of us brought small aquaria with us to use to take photographs. We would put the live shells in the tanks and photograph the animals as they came out to move around. The *Agaronia* did not play well with others and immediately began harpooning and killing anything that got in its way.

One of the richest areas we came across were piles of shells left on shore by fishermen. We found mounds of the largest *Chione gnidia* I had ever seen. We also found mounds of *Hexaplex erythrostromus* that is commonly referred to as the Pink Mouth Murex.

While our Shangri-La wasn't the one of tales it turned out to be one for us. We came home happy, tired and "well-shelled".

Selected References

- Abbott, Dr. R. Tucker. **American Seashells**, 2nd Edition. 1974
 Abbott, Dr. R. Tucker and Dance, Peter. **Compendium of Seashells**, 1982.
 Keen, A. Myra. **Sea Shells of Tropical West America**. 1971.



Rita Melvin, myself and Jim on the veranda during a lunch break. No we don't have cell phones. Those are **BOOKS!**



One of our rentals.



Part of the steps going down to the water.



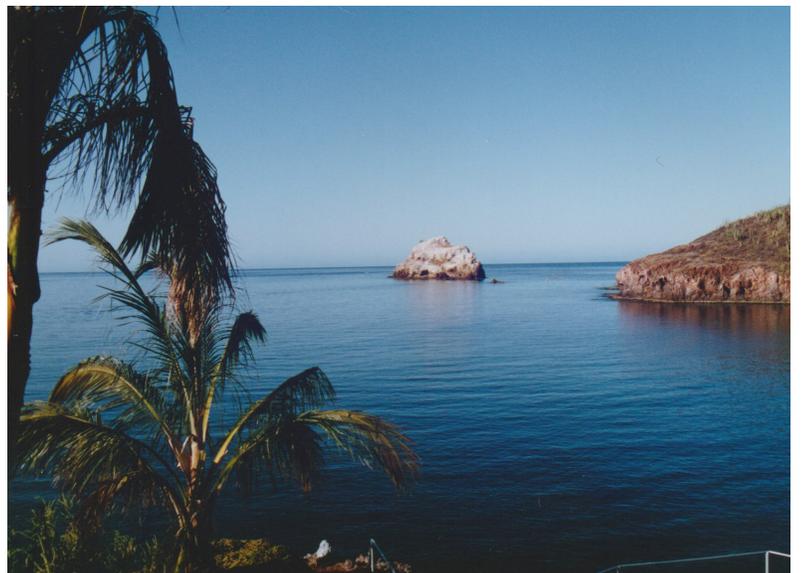
Much of a trip is spent sorting and cleaning. Jim must have bought a case of Pepsi for all of the *Chione gnidia* are neatly arranged in a flat.



Looking down from the veranda into the bay.



Americardia biangulata being examined by *Jenneria pustulata* in the tank. Usually we place sand in the tank bottom but clean sand was difficult to get where we were because of all the rocks.



Guano Island. Can you guess why this island is white?

by Linda Brunner

THE GENUS *OLIVA* IN THE NORTHERN GULF

Jim Brunner

I got a call recently from a member expressing confusion about the Olive shells in our northeastern Gulf of Mexico. I could certainly understand! This is a topic that made me throw my hands in the air two decades ago - a time when it seemed that the genus name was changing every fifteen minutes. But I thought I'd take a look and see if things had calmed down.

The general opinion is that we have two local species, one inshore and one offshore. The question is which two? The candidates are: *Oliva bifasciata*, *O. fulgurator*, *O. nivosa*, *O. reticularis*, and *O. sayana*.

Oliva bifasciata Küster in Weinkauff, 1878. This is a strong contender for our offshore species. The World Register of Marine Species (WoRMS) distribution map shows its range includes the northern Gulf of Mexico. Unfortunately it is quite variable and hard to distinguish from other similar species.

Oliva fulgurator (Röding, 1798). At one time this was considered to be one of the two northern GOM species but WoRMS shows its range is restricted from Cuba to the Yucatan and down into the Caribbean, thus it is not known in the northern GOM. (Read below to see how that changed)

Oliva nivosa Marrat, 1871. This species is restricted to the Caribbean. It is included here for reasons that will be explained below.

Oliva reticularis Lamarck, 1811. Do not confuse this shell with *Oliva reticulata* (Röding, 1798), which is a Panamic and Indo-Pacific species. *O. reticularis* is the second strong contender for our offshore species as it is found throughout the GOM and the Caribbean.

Oliva sayana (Ravenel, 1834). There is little doubt that our inshore species is this Lettered Olive. Its darker markings (when compared to the other four species) are quite consistent in all the Panhandle collecting sites I have been to over the years.

So what's the deal with *Oliva nivosa*? It is not the base shell itself but its subspecies that causes the problem. This is *O. n. bollingi* (Clench, 1934). [Editors note: *O. n. pattersoni* (Clench, 1945) is no longer considered valid in any sense, being regarded as an extreme color variation of *O. n. bollingi*.] This subspecies differs from the base species by having spiral dark brown bands that sometimes cover the entire surface of the shell so that no bands appear. If it really is a form of *O. nivosa* they should only be collected in the same area as *O. nivosa*, that is, the southern GOM and the Caribbean. But this subspecies has been collected in our area during offshore dredging. Either this form is not a variation of *O. nivosa* but instead is a variation of one of our offshore contenders; a possibility in that the ranges overlap that of *O. nivosa*.

Got all that? Now we have to consider synonyms. WoRMS considers both *O. bifasciata* and *O. reticularis* to be synonyms of *O. nivosa* thus dropping them out of contention for our deep-water species. The club's good friend Dr. Harry Lee of Jacksonville agreed in his 2009 *Marine Shells of Northeast Florida* that both species were indeed synonyms, but synonyms of *O. fulgurator*, which he feels is actually found along all of Florida's offshore waters.

So what do the pictures look like? Using Hardy's Gastropods.com *O. fulgurator* complies more closely with the shells in our collection than *O. nivosa* but that is suspect due to the limited sample size available. Of note: Of these two only *O. nivosa* lists *bollingi* as a subspecies, suggesting that additional research is needed to determine which species is the real parent of the subspecies.

So where does that leave us? Certainly *O. sayana* is our inshore Olive species. When it comes to the offshore species at least we have narrowed it down from a foursome to a coin toss. My coin flip comes down balanced on edge (but leaning toward *O. fulgurator*) but I could fall either way based upon further evidence. The good news is that if you have two typical shells they are relatively easy to tell apart. *O. sayana* has very dark markings and an elongated bullet-like shape. *O. fulgurator* has much lighter markings and is blunter in appearance.

So now that I've cleared that up for you I realize that it isn't a whole lot less confusing than 20 years ago. However, if you are going to do a display for this year's shell show feel safe in using *O. sayana* and *O. fulgurator* for your identifications.



O. sayana

O. fulgurator

O. f. bolingi

O. f. bolingi

To Meet or Not to Meet? To Show or Not to Show? These are the Questions!

It is time to examine when to resume meetings. Some of us have had shots but still must social distance and wear masks. Some of us have been unable to get shots but will probably be able to get them in the near future. It has been suggested that perhaps we can resume meetings in June. Please contact Jim, Phyllis or Luke with your thoughts.

The board has reserved the Lyndall Center for our show in September. The dates of the reservation are the 17 - 19. We have lost and gained members but all of us must band together to put on the show and we need to send out entry forms ASAP. This being said, what are your thoughts? Let one of the above members know.

Phyllis - pab8pab8@comcast.net

Luke - mama.luke44@gmail.com

Jim - jili1043@comcast.net



Shell Collection

The value of your shell collection is proportional to the data you assemble. Keeping accurate data with specimens is essential if you exchange shells or donate them to a museum or institution at some future date. Complete data should include: Collector, date, weather conditions, time of day, exact location, in what conditions shell was living (under rock, etc.). Notes concerning the depth of the water, type of bottom, and relative abundance are also interesting and useful. Through observation of living mollusks and complete records and data even amateur collectors can make important contributions to the science of malacology.

From 1989 Jacksonville Shell Show Program, p. 20



Update on the COA 20/20.

The Sheller's Family Reunion

Alan Gettleman

Registrations for the COA 20/20 Return of Human Space Flight and the COA to the Florida Space Coast show a good initial response as well as reservations for the Hilton Rialto in Melbourne, Florida. We are optimistic that we will be able to have a convention in June. Florida has already reopened major attractions such as Walt Disney World, Sea World and Universal Orlando with social distancing and other health precautions. The space program continues in full launch mode with manned and other launches and we hope for a space launch around convention time. Unfortunately, it appears the cruise industry may not get the approval to resume cruises from the Cape Canaveral port before our convention.

Registrations and latest information can be found on the COA website at <https://conchologistsofamerica.org/> We can answer specific questions by contacting lychee@cfl.rr.com.

The convention begins with a tour of the Kennedy Space Center on Monday, June 14. Your local club guide will be a NASA retiree who worked on several Space Shuttle missions, including the two flights that included mollusks, and the Mars Pathfinder mission of the landers that culminated with Perseverance in February. We have a Harbor Branch Oceanographic and McLarty Treasure museum tour on Tuesday, June 15. Both are full day tours.

We hope to have evening turtle hatching tours on those evenings, but we will not find out until later if we can receive reservations for those spectacular oceanside events.

The convention begins at 1 pm on Wednesday, June 16th with programs/silent auctions. Special shells will be door prizes for each program. Wednesday evening is our Welcome Party. Since we are on the Space Coast we ask attendees to dress as their Favorite Astronaut, Favorite Space Character, or Favorite Space Creature. The best in each category will

get a space related prize. The sky is not even the limit for your imaginations of costume.

Thursday continues with silent auctions, programs and door prizes. Thursday night is the premier COA oral auction of spectacular and rare shell items. We are still looking for donations of premium items for the auction which is one of the primary funding sources for COA. Contact Dave Green, Oral Auction Chair at dgreen2@entouch.net. Friday continues with meetings and concludes with the COA business meeting and that evening the COA banquet with a guest speaker from the space program.

The world famous Bourse with the premier shell dealers on Saturday (1pm-8pm) and Sunday (9am-2pm). We also have the COA raffles that includes a spectacular 18" diameter Sailor's Valentine made by a COA member which comes upon a detachable 26" stand.

Our hotel is the Hilton Rialto in Melbourne with room rates of \$125 per night. Junior suites are available for available for \$145. All rooms have refrigerators, in room safe, and free wi-fi. The hotel offers pool, hot tub, tennis courts, and an indoor exercise gym. ALL events (except of course for field trips) are located on the first floor of the hotel- easy access to all of the meeting events.

COA has weathered interesting challenges with conventions. Our second convention scheduled on a cruise ship that blew up before the convention. The first Key West COA was interrupted by a hurricane.

The conventions did go on and the attendees had a great time. We know you will have a great time at the Sheller's Family Reunion to meet and celebrate at the only national shell convention which will be held in the U.S. this year.

GLOSSARY



- Conchology** — the study of shells
- Malacology** — the study or science of mollusks, or the living animal
- Paleontology** — the study or science of the ancient life of the globe or of fossil organisms, either animal or plant

MISCELLANEOUS

- Holotype** — a single specimen used in naming a new species or subspecies
- Monotype** — a recent or fossil specimen used as a basis for naming a fossil form quite similar to it
- Paratype** — any one of several specimens on which a species is based, except the Holotype
- Topotype** — a specimen from the same locality as the type

SHELL DESCRIPTION

- Aperture** — the opening 'mouth' of univalve
- Columella** — the central axis around which the whorls of a univalve are coiled
- Dextral** — right-handed, turning clock-wise or to the right
- Periostracum** — a skin-like covering on outside of shell, may be of several different textures, for instance the Oregon Triton, *Argobuccinum oregonensis* has a thick, stiff wooly periostracum.
- Protoconch** — embryonic shell, the apex in univalves
- Sinistral** — left-handed, turning counter-clockwise or to the left

From 1989 Jacksonville Shell Show Program, p. 19



I love when Members send photos. This one is from Charity Kotval and is of a sunset at Mexico Beach. Thank you!

