



SHELL-O-GRAM

Official Publication of the
JACKSONVILLE SHELL CLUB, INC.

March-April, 2000

Volume 41(2)

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March Meeting

The Wednesday, March 22nd meeting of the Jacksonville Shell Club will be held at the Southeast Branch Public Library at 7:00 PM.

The month's educational program will be presented by Betsy Lyerly and Gertrude Moller and is entitled "shell crafting." The program will also include some of their beautiful Christmas ornaments.

The Shell-Of-The-Month will be given by D. D. Jewell on *Argopecten gibbus* (Linnaeus, 1758) - Calico Scallop - a colorful species used in shell crafting.

As is customary, refreshments will be served and guests are cordially invited to attend.

April Meeting

The Thursday, April 27th meeting of the Jacksonville Shell Club will be held at the Southeast Branch Public Library at 7:00 PM.

Charlotte Lloyd will present the month's educational slide program chronicling her March collecting trip to Guana Cay in the Bahamas.

The Shell-Of-The-Month will be given by Bill Lyerly on *Cymatium nicobaricum* (Röding, 1798) - Goldmouth Triton - a species with circumglobal distribution which includes Florida and the Bahamas.

Plan now to attend and bring a friend or guest!

Notes on Diving at Nuku Hiva Island, Marquesas, and Moorea Island, French Polynesia

By Charlotte Lloyd

This was my first visit to the tropical islands of French Polynesia and I really looked forward to the trip. My traveling companions were Wayne Harland and Gene Everson. They are well-known collectors and shell experts with lots of experience in traveling to exotic locations. Gene made the arrangements for the boat, transportation and the other details. Finally October 25th arrived, and I was on my way.

My flight to Los Angeles to meet up with the famous duo was comfortable and uneventful. Wayne found me at the A.O.M. French Airlines counter in Los Angeles trying to find out if my luggage from the Delta flight had made it across the U.S. with me. After 30 uneasy minutes a young ticket agent assured me he had seen my two bags with his own eyes and that they would indeed arrive with me in Papeete. We found Gene, waited another hour (delayed flight) and boarded the plane for the 8-hour overnight flight. I figured I could sleep on the way there. Wrong! First the seats were designed for the girth and height challenged - and we certainly did not fall into that category. Second, the young boy in the seat behind me kicked the back of my seat and coughed all night. Oh well - I've done without sleep before. The 4-hour flight from Papeete to Nuku Hiva Island was great and provided wonderful views of the rocky peaks and tranquil bays as we approached the island. A cab driver was waiting to collect our gear and us and to transport us to the boat. The 8-10 mile ride took us 40 minutes over a dirt road laden with potholes and rocks to a bay where our boat Captain Alain Relmy awaited us. The Captain welcomed us; we loaded our gear on to his 30-foot boat and headed out to sea. (cont. on page 5.)



Jacksonville Shell Club, Inc.

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The Shell-O-Gram is issued bimonthly and mailed to all regular members. Annual membership dues are \$12.50 individual and \$15.00 family. Lifetime membership is available.

Send dues to: Teresa St. John, Treasurer
2605 Emily Court
Jacksonville, FL 32216-5101

The club meets each month, excluding December, at the Southeast Branch Public Library, 10599 Deerwood Park Boulevard, Jacksonville Florida. Please address any correspondence to the club's address shown above.

Closing date for article submission is two weeks prior to the first of each month of publication. Articles may be republished provided full credit is given the author and this newsletter and one copy of the complete publication in which the article appears is mailed to Editor at the above address.

Millennium 2000 Shell Show

The Jacksonville Shell Club will hold its 34th show at:
The Brampton Inn (formerly the Ramada Inn)
1201 North 1st Street
Jacksonville Beach, FL 32250

The shell show will be open to the public on:
Saturday, July 15th from 9:00 AM to 5:30 PM
Sunday, July 16th from 10:00 AM to 5:00 PM

There will be exciting and informative scientific displays, beautiful arts and crafts, shell dealers, our club's own shell store, and a raffle and door prizes – something for everyone!

On Saturday evening the banquet will be held at the lovely Selva Marina Country Club in Atlantic Beach, with cocktails, a delectable dinner and presentation of shell show awards. It promises to be a special evening.

Shell show rules and regulations, entry and banquet reservation forms, and other information will be mailed soon.

Volunteers are needed for different committees, in particular, the shell store, sand flea market, door prizes and scientific layout. Can you help?

We hope all of our members will exhibit or volunteer to help make this, our Millennium 2000 Shell Show, a memorable one.

Contact Judy Blocker at (904) 246-4012 or Carol Rishel at (904) 247-7876 to volunteer for one of the open positions or for additional information.

Membership List Changes

- Welcome New Member -

Douglas G. Jeffrey
500-1090 Homer St.
Vancouver, British Columbia
Canada V6B 2W9
Phone: (604) 689-1090
E-mail: Djeffrey@compt.com

- New Address -

Nancy Garry-Chadwick
4600 Middleton Park Cir.E.
ALF 233, Cypress Village
Jacksonville, FL 32224-5691
Phone: 821-5569
E-mail: N.garry-chadwick@worldnet.att.net

Upcoming Event

****Central Florida Shell Show** – Central Florida Fairgrounds, Orlando, FL. Contact Kathy Sarkin, 624 Fieldstream Blvd., Orlando, FL 32825, Phone (407) 277-6001, E-mail Dkwiat@micro-energy.com.

Club By-Laws Change

It has been proposed that the Club By-Laws, in regards to membership dues, be changed to more accurately reflect changing technology and the giant strides made in global communications. To this end, it is proposed that "Section VIII. Dues" which currently reads:

"Annual dues are \$12.50 per person or \$15.00 per family. The membership year runs from September 1 through August 31; and dues are payable on or before September 1 and become delinquent on September 1. Members joining after March 1 will be charged one-half (1/2) the yearly dues for the remainder of year. Lifetime memberships are \$125.00." be changed to read "Annual dues are \$12.50 per person or \$15.00 per family

(domestic) and \$20.00 for both individual and family (foreign). Membership dues are payable on or before the 1st of the month following the membership expiration date. Lifetime memberships are \$125.00.”

Background: The by-laws were promulgated when club membership record keeping was done exclusively with 5 x 7-inch cards. In recent years, a computer database has been used to supplement this method making it possible to easily track membership expiration dates, regardless when that member joined. The membership expiration date is now included on the mailing labels such as with any commercial magazine subscription. This negates the need for half-year memberships. With the tremendous growth of global communications (Internet, E-mail, etc.) and the club’s presence on the Internet, there are increasing numbers of foreign individuals desiring to join the club. Each mailing of a Shell-O-Gram domestically currently costs \$.33 for postage while a corresponding foreign mailing costs \$1.40 (eight page issue) to \$1.60 (ten page issue). The creation of a foreign membership category (at an increased tariff to reflect the additional costs of postage) would ensure that the club doesn’t lose money on each foreign membership.

The aforementioned changes will be voted upon by the general membership at the April regular Jacksonville Shell Club Meeting.

Kiwanis Science Fair 2000

The morning of February 8th, your editor and Charlotte Lloyd traveled to the Jacksonville Fairgrounds to judge the 45th Northeast Florida Kiwanis Regional Science and Engineering Fair on behalf of the Jacksonville Shell Club. As in past years, the club offered a \$50 cash stipend to the best science project dealing with marine science or malacology and a \$25 award to the runner-up winner. This year’s event was the best physically organized that this scribe has seen in eight consecutive years of judging. This was reflected in the minimal time that it took to perform the task at hand.

After reviewing all the projects and interviewing those individuals whose projects fell within the realm of club interest, Robert M. Joseph was selected as the club’s winner. Mr. Joseph’s project was entitled “The effect of substrate color on the growth of barnacles.” During the project, seven panels of wood were painted various colors (all with the same brand of paint) and submerged in estuarian water for 36 days. At the end of the period the number of barnacles growing on each panel was recorded. Of the 12 barnacles that had grown, half had grown on the white panel while the blue and green panels had no growth at all.

The club’s runner-up winner was Dana Terre, who also studied the growth of barnacles. However, Miss Terre studied “What surface do barnacles prefer to grow on?” During her project, a variety of materials (cement, plain wood, plastic, varnished wood, metal and fiberglass) were submerged in the water for eight weeks. At the end of the period, the number of barnacles growing on each material was recorded. Of the total of 52 growths recorded, 39 were on the cement, fiberglass had a single growth, plastic none at all, and the remaining materials had four each.

The winners have been invited to present a brief presentation concerning their respective projects to the membership at an upcoming club meeting.

Another Shelling Ban?

When the Florida Fish and Wildlife Conservation Commission (FWCC) met in Jacksonville the first week of February, it received a staff report in regards to the proposal by the city of Fort Myers Beach to ban the harvest of live shells within that city’s jurisdictional limit. It should be noted that the term “shells” as used here by the FWCC is synonymous with “shellfish” which is defined as members of the phyla Mollusca and Echinodermata. As a result of the meeting, the FWCC directed its staff to develop a proposed rule amendment to prohibit the harvest of live shells contingent upon a public hearing to be conducted by the city regarding this issue.

If ultimately approved and incorporated into Florida law, this would represent the second time that a Florida city had enacted such a ban – the first of course being Sanibel on January 1st, 1995. Since the area of proposed action belongs to the state of Florida (below the mean high water line), any such changes to the use of these waters must be approved by state government.

Since Sanibel’s ban, Lee County (the county in which both Sanibel and Fort Myers Beach are located) also enacted a restriction banning the harvest of more than two live shellfish of any species per-day. This was followed by Manatee County on July 1, 1996, which enacted the same restriction as Lee County. Specifically excluded are those edible species “oysters (*Crassostrea virginica*), hard clams (*Mercenaria* spp.), and (sic) sunray venus clams (*Macrocallista nimbosa*), bay scallops (*Argopecten irradians*, and coquinas (Genus *Donax*.” It should also be noted that harvest is defined as “the catching or taking of live shellfish by any means whatsoever, followed by a reduction of such shellfish to possession. Temporary possession of a shell for the purpose of determining whether it contains a live shellfish shall not constitute harvest, so long as such shellfish is not harmed in any manner.” Additionally in

regards to Lee and Manatee Counties, simple possession (other than temporary) is prohibited.

My Cedar Key Adventure

By Alice Monroe*

How about a Cedar Key shelling adventure? It sounded great to eight of our members in December. Sue Lohkamp, Roni Mucci, JoAnn Robison, Christine Ross, Charlotte Sherman, Katherine Smith, Diane Wiener, and I signed up and made our plans to go.

Upon arriving at the Beachfront Motel, the party of seven (that should have been eight) was eager to get in the mud. Walking down the street in their shelling finery they could not help but attract the attention of island males cruising in their pickup trucks. Resisting the temptation to experience island nightlife, the determined shellers opted for the mud flats. After finding a few clams, even more oysters, and lots of mud, they eventually ended up enjoying the music of the bar scene by "window-shopping" only, so they told me. Local men just did not meet their standards -- they were not old enough!

I had told the rest of the group that I thought I should drive by myself because I did not know when I would be able to leave work, and could not be counted on for transportation. I finally got away at 4:30 p.m. and ventured up Highway 19, which is a nightmare any time, but especially during rush hour on a Friday. All went well, albeit slowly, until I stopped for gas in Inglis. After filling up, when I attempted to start my van, it absolutely did not respond. I had unknowingly picked the Friday night hot spot of Levy County to break down. There was no shortage of eager assistance and soon I was surrounded by eleven guys, of course all of them "mechanics." They formed a semi-circle around my open hood, and after plenty of pensive dipping, chewing, and spitting, I had eleven opinions about what was wrong. My conclusion after listening to them was that I probably knew just as much about it as they did. Determined to help me get back on the road, they wanted some tools. Much to their surprise, I was able to produce jumper cables, an 18-inch Mag-lite, socket wrenches, pliers, and screwdrivers. Jump-starting was fruitless. We then tried to pull the alternator out, but one bolt was frozen. After we determined that the auto parts store had closed, and we really could not accomplish anything more that night, I thanked them for their efforts, and assured them they had done their good deed for the millennium. I also noted that there was an auto repair garage next to the gas station that opened at 8:00 a.m. in the morning, complete with real mechanics.

My primary concern at that point became notifying the rest of the group that I would not be joining them until in the morning. As a last minute thought, I had brought a copy of the *Central Florida Shell News* with me because it had a map, the address, and phone number for the Beachfront Motel. The Central Florida Shell Club had been to Cedar Key the previous month. I tried to call the motel, but got a recording that the number had been disconnected. I redialed and got the same message. I called information, received the same number, tried one more time, and heard the same message. Finally I called Kathy Sarkin, the field trip chairperson for the Central

Florida Club, thinking maybe she could provide me with some information since she had recently been there. She told me the Beachfront Motel was up for sale, and maybe it had been sold, or possibly was closed. Meanwhile, the party of seven kept checking at the motel office to see if I had called. I never did make contact with anyone at the Beachfront to leave a message, but found out later that Diane had called that same number to confirm our reservation just two days earlier.

After resigning myself to the fact that I was there for the night, I prepared to camp out. Aside from being parked so close to the highway I could feel the trucks running all night, as well as cars squealing tires in and out of the gas station, it was a fairly restful night.

Saturday morning I awoke with my van enshrouded in fog and literally surrounded by a convoy of elevated pickup trucks, complete with gun racks and hound dogs. It was a welcome to hunting season that I did not need.

Not being able to see past the trucks, I went over to the garage, just to make sure it was really a service garage. In my favor, it opened at 7:30 a.m. and I was right there to explain my situation. One new battery later, I was on the road again by 8:30 a.m., and arrived at the dock at Cedar Key at 9:15 a.m., not realizing then that I had literally just missed the boat.

Meanwhile, those who were truly experiencing Cedar Key shelling met at the dock to board the *Island Hopper* at 8:00 a.m. Dense fog delayed departure for an hour and prevented the planned three-mile excursion. The new destination became Atsena Otie Key, a half-mile offshore from Cedar Key. Originally called Depot Key, it housed a pencil factory and sawmill until they were wiped out by a hurricane in 1896. The *Island Hopper* dropped off the party of seven in ankle-deep water, at a place they dubbed "Sand-dollar Beach," so named for the abundant four-inch sand dollars. The group found many of the typical Florida shells one might expect to find there:

- *Busycon sinistrum* (Lightning Whelk)
- *Busycotypus spiratus* (Pear Whelk)
- *Fasciolaria lillium hunteria* (Banded Tulip)
- *Melongena corona* (Crown Conch)
- *Neverita duplicata* (Shark Eye)
- *Sinum perspectivum* (White Baby Ear)
- *Urosalpinx tampaensis* (Tampa Drill)
- *Terebra dislocata* (Eastern Auger)
- *Nassarius vibex* (Bruised Nassa)
- *Littorina angulifera* (Mangrove Periwinkle)
- *Crassostrea virginica* (Eastern Oyster)
- *Mercenaria campechiensis* (Southern Quahog)
- *Dinocardium robustum vanhyningi* (Vanhyning's Cockle)
- *Argopecten irradians concentricus* (Bay Scallop)

Most notable about the shells were the intense apertural color variations of the Lightning Whelks: purple, chocolate, orange, and gold, as well as a dark chocolate and golden Pear Whelk. Shellers were warned not to dig on any exposed part of the island. An Indian skeleton had been unearthed there, and now the island is a state archeological dig site.

After two hours of shelling, the fog had lifted and the party of seven returned. I drove up and met them just as they were

walking up the dock, and of course wondering where I had been.

After lunch, the weather was absolutely gorgeous - unseasonably sunny, clear, and cool. It afforded us the opportunity to explore the island shops, look at some alternatives to the Beachfront Motel, buy lottery tickets (at least those who were interested in the \$54 million), and visit the Cedar Key State Museum. Of particular interest at the museum is a collection of shells of St. Clair Whitman, who collected local shells as well as traded local shells for worldwide shells.

We returned to the motel and cleaned shells. Diane demonstrated a real knack for twisting her wrist and pulling the animals out whole. Again we were awed by the apertural colors of the Lightning Whelks.

By Sunday morning our group had dwindled to four. During the morning low tide we went out on the mud flats in front of the Beachfront Motel, and added a few more species to our list and a lot more mud to our clothes. After a leisurely lunch in Crystal River and a few more shops, we uneventfully made our way back to Pinellas County.

*Adapted from an article by Alice Monroe (E-mail: Monroea@spjc.edu) and originally published in *Suncoast Shorelines*, Vol. 16, No. 3, Jan.-Feb., 2000 - newsletter of the Suncoast Conchologists.

Editor's Comments: Since the appearance of the original article, follow-up coordination with the author indicates that the Beachfront Motel has not yet been sold. Additionally, she never was able to find out why their phone had been disconnected. The motel was reportedly in a state of disrepair. They (the group) decided that they would not return to that locale in the future and would favorably consider other accommodations such as the "Park Place" - which has very nice rooms, is conveniently located and costs about \$10 more per-night than the Beachfront Motel.

Cedar Key Resources:

- Cedar Key Chamber Of Commerce:
<http://www.cedarkey.org/>
- Cedar Key Beacon (Newspaper):
<http://www.cedarkeybeacon.com/>
- Cedar Key Mollusk Checklist:
<http://home.sprynet.com/~wfrank/cedarkey.htm>

Marquesas And French Polynesia – Continued

The outside passage to Anaho Bay gave us a glimpse of what to expect in the coming days - seas sometimes 6-8 feet, no beaches, the island a rugged, jagged abutment of volcanic peaks and valleys with virtually no roads connecting the few tranquil bays. The only mode of transportation on this island was by boat. This is definitely not the picture I had conjured up in my mind when I had imagined French Polynesia. Where were the coral atolls with low islands covered by coconut palms? Actually French Polynesia has two entirely different types of islands: high volcanic and low coral islands. While we might find some coral present on the

Marquesan coastlines, there are no real coral reefs surrounding the island.

A 60-foot sailing sloop anchored in Anaho Bay was to be out home for the next 10 days. We would dive from the smaller boat, which had a compressor. The sloop was very basic (as were our meals) but adequate. The owner Jean Michele and his wife Elizabeth laid down the rules: no salt water below, rinse off with a bucket of fresh water on the deck - change clothes and dry off before going below. After dinner we couldn't wait and went into the water with nightfall to see what shells might be lurking under the sloop. (Dive #1) The bottom was very silty, about 45 feet deep with visibility about 8 feet. I immediately spotted a *Conus vautieri* so I was hooked, and knew I would be down as long as possible. I managed to find Gene and we kept in sight of each other and spotted *Conus tessulatus*, *Neocancilla papilio*, *Nassarius papillosus*, *N. candens*, and *Natica zonalis* on the silty mud. Eventually we found rocks and located *Murex steeriae* and wonderful *Latirus nodatus* with their beautiful lavender/purple mouths.

Imagine our surprise the next morning to find that sunrise was at 4:30 AM! After a hearty breakfast of coffee, sliced bananas and French bread, we were off for a dive at the mouth of Anaho Bay (Dive #2). The bottom at 90 feet was sand and scattered rocks. I saw *Conus moreleti*, *C. unicolor*, *Strombus dentatus*, battered-looking *Chicoreus ramosus* and large dead *Cryptopecten pallium*; the Royal Cloak Scallop scattered everywhere. At the base of the cliff the seas create quite a surge that can toss around shells, small rocks - not to mention a diver. This area had an abundance of large spiny sea urchins and it took a lot of energy not to be slammed onto the urchins.

Back in the boat Wayne proudly displayed his two *Lambis crocata pilsbryi* an endemic subspecies that he had found in the sand - one a magnificently large specimen.

After lunch we went snorkeling along the rocks in the protected bay. (Dive #3) Saw many tropical fish and the following shells: *Heliacus variegatus*, *Cypraea moneta*, *Cyp. isabella*, *Cyp. caputserpentis*, *Cyp. maculifera*, *Cerithium echinatus*, *Maculotriton serriale*, *Engina incarnata*, *Clypeomorus brevis* and several species of *Drupa* and *Cerithium*. Perhaps the nicest shell from this area was the endemic *Peristernia lirata* that was found nestled in crevices on dead mossy coral. I also collected some grunge in about 2 feet of water to later search for micros.

For our night dive (Dive #4) we had decided to go back to the area of our 2nd dive because it looked so good and Wayne had found two *Lambis* there. It was a good decision - and thus we descended to a 115 feet deep and somewhat eerie dive. Once oriented we then worked

back up to around 90 feet. The wall was deeply undercut and it was easy to suddenly find yourself 30 feet back under the ledge with an unexpected ceiling overhead. Visibility of 15-20 feet did not help matters any. We all spotted wonderful shells. I observed a gorgeous *Conus bullatus* as did Wayne and Gene. What a thrill to shine my light on the red/pink/cream colored beauty crawling across the bottom. I also found a very large dead *Conus marchionatus* that had my teammates pretty excited. (Once home I found the *C. marchionatus* measured 58 mm. and did clean up nicely for a dead shell.) My two dead-taken *Cyrtulus serotinus* were a thrill to find, and I'm sure it's just a matter of time until we see live ones. What a strange looking shell, and the only living species in the genus *Cyrtulus*.



Conus bullatus (Charlotte Lloyd photograph)

Next morning after the same breakfast we dove at 8:30 AM on a rocky wall with a cave (Dive #5). Wayne found a nice *Cypraea maculifera* in a cave, Gene observed a *Cymatium intermedium*, but we didn't see much else. We all agreed this could be a good area at night.



Conus marchionatus (Charlotte Lloyd photograph)

For our evening dive (Dive #6) we endured a rough and bouncy trip to get to Hakaea Bay. We dove at 90 feet on sand and immediately saw live *Cyrtulus*

serotinus on the sand along with dead ones. I found a dead *Murex thomasi* to examine later. Also saw a wonderful *Murex ramosus* with long delicate spines. When we returned from our night dive at 10:45 PM, the sloop owners were irate and shouting about our getting back at 10:45 PM instead of 9:00 PM. I had caught a cold, felt rotten, and was not willing to enter the fracas - I went to bed.

In the morning after a breakfast of - you guessed it - Jean Michelle said, "we could stay on his boat if we agreed to no more night diving" - we had come to dive at night so we "packed up." We were invited to stay with the captain and his girlfriend/partner Odile. Thank goodness, as we really didn't have other options. Odile is the doctor in charge of the local hospital; and she has one of the finest collections of shells from that area. So we were happy to know we would get to see her wonderful collection. On the way back to the village we would get in a days diving and one night dive. We snorkeled in a bay (Dive #7) and found thousands of little *Nassarius vittatus* right in the surf line. Each wave would pick them up and toss them in circles in the water column with the animals using their mantles to swim/dive back to the bottom until the next wave and then they were off again. That night we dove at Takaea Point (Dive #8) in 90 ft. of water on fine sand/gravel. The bottom was literally alive with *Nassarius tabescens*. It was a very productive area and we saw *Harpa amouretta*, *Malea pomum*, *Conus marchionatus*, and other cones. Still no *Conus gauguini*. I sure would like to find and photograph one of those beauties. This cone is named after the famous French Post-Impressionist painter Paul Gauguin (1848-1903), who captured the beauty, charm and culture of Tahiti and its people on his canvases.

Thanks to Alain and his friend Gee (pronounced Guy), we were able to move on to a 38-foot sailboat owned by Gee's girlfriend with Gee as our new captain. It is much nicer; we can use the lights, sit in the salon and talk to each other and have tasty meals. We are again anchored close to the diving areas (no more long runs). On this boat I can finally do some of the photography of live animals that I enjoy so much.

That night (Dive #9) we dove in 105 feet of water. The bottom was very silty and even the rocks and coral heads at 85 feet were covered with silt. The *Cyrtulus* must like this condition because they were fairly common. I also found a *Bursa rhodostoma* on a rocky outcropping. What a wonderful experience when each and every shell you see is new to you.

Monday Nov.1st. Woke up and my cold is much worse. We have moved the boat to an anchorage that is calmer. I don't think I will be able to clear my ears to dive tonight. I miss the best dive of the trip - both Gene

and Wayne find a *Conus marielae* - but at least I get to photograph it.

The next day - I'm sick, and so is Captain Alain with an infected ankle. We both visit the hospital so that Odile can give me decongestants, antibiotics and nose spray, and Alain receives medical treatment for his foot. We go back to the sailboat and I decide to dive that night. I can't be much worse off. I finally get to the bottom in 80 feet expecting my left eardrum to rupture but surprisingly I complete the dive and find a beautiful fresh dead *Cypraecassis rufa* and many other nice shells. Ascending was interesting with my ears squeaking and venting.

The next morning Alain's foot is much worse. After returning to town (long rough boat ride) surgery is scheduled for him at 2:00 PM. Our diving is over. We find rooms at the local hotel and I read and try to recuperate for the next three days. The *Conus gauguini* has eluded us; however Odile gives us each one from her collection.

The trip to the Airport from Alain and Odile's house was a two and a half-hour journey on dirt roads over the 4,000-ft. high mountain peak. The temperature is 15 degrees cooler as we journey through the rain forest of umbrella ferns, bromeliads, orchids, and other tropical foliage. From this lush, damp environment we descended to the other side of the island to the rocky, arid wind-swept terrain of the airport. Simply amazing!

It seemed a shame to come all this way and not see Tahiti. So Wayne and I got off the plane in Papeete and took a ferry to Moorea Island for three days. This was the tropical paradise that I had expected. We stayed at a beautiful resort that had cabanas right on the beach. We were just steps away from corals, tropical fish, giant sea anemones with clown fish, and *Tridacna maxima* clams. It was such a delight to see the animals I had only viewed before in films and books. The night snorkeling was all I had hoped for. Giant *Conus litteratus*, *C. virgo*, and *C. quercinus*, making trails in the sand by the coral. The sandy areas between coral heads produced *Terebra maculata*, *T. guttata* and *T. areolata* plus *Mitra mitra* and *M. stictica*. In the shallow water *Conus arenatus*, *C. vautieri*, and *C. flavidus* were common. We would get in the water at night and float along with the current enjoying the sights. One sight I'll never forget was the nudibranchs on the sand in 1-3 feet of water right off the swimmers beach. Brightly colored orange and white and they were everywhere! In depressions by the dozens, mating, crawling, laying strings of eggs on everything. There must have been thousands of them. I was worried about stepping on one in the dark.

Looking back on the trip in general, I can finally say I enjoyed it. There were problems beyond our control, but we still managed to see some of the rare and endemic

mollusks that inhabit the waters of the Marquesas. For me part of the delight was to be able to compare the tranquil coral fringing reef of Moorea Island to the rugged natural beauty of Nuku Hiva Island.

**From Minus Degrees to Minus Tides In A
Millenium Miracle
Shelling The West Coast Of Florida
By Karen VanderVen***

The lowest tides in one hundred years and shelling guide Peggy Williams' December 19th -26th Florida shelling trip, on which you shelled a different spot on the Florida west coast each day - who could resist? Having read the announcement of the trip, I couldn't and fled cold and snowy Pittsburgh for Florida.

Peggy's first task after picking me up in Sarasota was to get the rest of the group, totaling six - Hadley Young, Stephanie Spikell, Ed Frayer, Clare Horner and myself - assembled. Half of us caravanned to the Tampa airport, where the other three were to be picked up. "How will we find them?" someone lamented. When we got to the sidewalk outside the baggage claim area, I was dispatched to round them up. I cut to the chase. "Anyone here going on a shell trip?" I boomed as I strode into the milling crowd. Faster than an olive pounces on a coquina, the shellers came forward, and we were soon on our way to Cedar Key, our first stop.

As we made our way up the west coast, chattering away, I "felt in my bones" that there would be something very special about this trip and that by the time it was over, this unique aspect would have emerged. And so it came to pass.

Flat on a Major Key

We spent the night in Cedar Key at the Beachfront Motel, well known to generations of shell collectors who have stayed there during club field trips. We were to get up before dawn to go out on the exposed flat across the street that only appears during the lowest tide. When we went to bed there was no sign of it. Upon awakening the next morning, while it was still pitch dark, I heard a voice from upstairs, "I don't see any flat out the window". "What?" I thought for a second. "Has the millenium arrived already? Have the tides reversed?" When I went out and crossed the street, however, there was the flat - eerily extending out as a whitish luminescence into the dark, surrounded by tiny wavelets lapping at its edges. I could see, too, how someone looking out some of the motel windows facing away from the flat would of course see only water.

Knowing that the flat was still there, I wanted to get underway. With the excitement of young children

awakening in the pre-dawn of a Christmas morning, flashlights winking, we strode onto the flat. As it gradually got lighter, the finds were being recorded: tiny live *Busycon spiratum* (Pear Whelk), *Neverita duplicata* (Shark Eye), *Melongena corona* (Crown Conch), *Busycon sinistrum* (Lightning Whelk), *Fasciolaria tulipa* (True Tulip) and *Fasciolaria liliun hunteria* (Banded Tulip). In the seaweed clumps at the edge of the flat were *Costoanachis semiplicata* (Gulf dove snail), and for lucky Clare, a wentletrap, *Epitonium humphreysii* (Humphreys' Wentletrap).** For everyone were large and majestic *Dinocardium robustum vanhyningi*, when we could reach them before the gulls did; and *Sinum perspectivum* (White Baby Ear). Under the oyster clusters were two of my favorites, *Urosalpinx tampaensis* (Tampa Drill) and *Urosalpinx perrugata* (Gulf Oyster Drill). For the lovers of small shells were *Modulus modulus* (Buttonsnail), *Olivella cf. floralia* (cf. Rice Olive), *Nassarius vibex* (Bruised Nassa), *Prunum apicinum* (Common Atlantic Marginella), *Turbonilla incisa* (Etched Turbonille),** *Littoraria irrorata* (Marsh Periwinkle) and *Terebra dislocata* (Eastern Auger). There were also an interesting brown and white striped *Mercenaria mercenaria notata* (Gaudy Hardclam)** that Peggy explained was a product of local mariculture and other bivalves such as *Anomalocardia auberiana* (Pointed Venus), *Mulinia lateralis* (Dwarf Surfclam), *Chione cancellata* (Cross-barred Venus) and *Carditamera floridana* (Broad-ribbed Carditid).

Peggy helped shellers identify *Cryptopleura costata* (Angel Wing) holes and indeed one digger got down far enough to reach one reclusive specimen that retracted and broke its shell. There seemed to be an implicit agreement among us that we would not pursue these recalcitrant piddocks despite spotting their distinctive holes here and there.

We all smiled later reflecting on the help we had given a forlorn seeker of sand dollars out on the flat. Sand dollar dark gray round shapes and trails were everywhere, but somehow this fellow couldn't recognize these as he literally stepped on them.

On our way south to be ready for our next day's shelling in the St. Petersburg area, we made a stop at the Lipes' Shell Store. There I not only was able to stock up on the tiny bags that I need for my micro specimens but also to fulfill my long time hope to acquire a *Conus delessertii* (Sozon's Cone)** with an operculum.

It Doesn't Get Better Than This

The next day thus found us south of St. Petersburg under bright skies, with extensive territory to plumb both in Tampa Bay and on the Gulf side. "Last one in is a rotten egg cockle!" I sang as I headed out trying to

decide whether to start with the acres of exposed flats, rocks, mud or grass beds.

There were marvelous shells, large and small. Some were the same species we had found on Cedar Key but there were new ones as well: *Seila adamsii* (Adams' Dwarf Cerith),** *Pleuroploca gigantea* (Horse Conch), *Strombus alatus* (Florida Fighting Conch), *Oliva sayana* (Lettered Olive), and a paper bubble (*Haminoea*) species. In one small area I found several slender and sharp-pointed black and gray *Terebra protexta* (Fine-ribbed Auger).

Bivalves included *Tellina tampaensis* (Tampa Tellin), *Tellina versicolor* (Many-colored Tellin), *Laevicardium mortoni* (Yellow Eggcockle) and dozens of pairs of huge dead *Macrocallista nimbosa* (Sunray Venus) and *Micromelo undatus* (Miniature Melo). Time rushed by as fast as the water rolls back in when the tide turns. As we piled into the van glowing with pleasure, I exclaimed "It doesn't get better than this." Well, actually it does - as we found out the next day.

Tiptoe (or Run) - to the Tulips

What could be more glorious than to climb on a boat just as the rays of the rising sun glint on the gently moving waters of a South Florida inlet and head to an obscure flat in the mangrove islands off of Goodland? Further enhancing this experience for me was the fact that the trim, speedy vessel I rode on was captained by Phil Miller, whom I had met on Peggy's summer Bahamas trip. We enjoyed catching up, and I was all ears for Phil's tales of shelling in the area. Soon we had spilled out of the boats and in traditional shellers' pose were pecking over the flat like so many birds looking for worms.

When collecting shells our senses are sharpened - we look for that change in the stimulus input, usually visual, but sometimes auditory, that leads us to a new find. When my own intense search for flashes of color and puffs in the sand or grass was interrupted by a heightening and quickening of chattering voices across the flats, I knew somebody had found something special. Trotting over and joining others who similarly knew something was up, I discovered that the prize was a spectacular bright red true tulip, found by one of the members of the Sarasota Shell Club who had joined us for the Goodland trip.

Suddenly, as if seized by gold fever, each of decided that we *had* to find a red tulip, and we intensely prospected the flat, heads down, uncovering any likely protuberance. Several more red tulips indeed were found. While I was not one of the lucky ones, I did acquire an almost pitch - black specimen. A quick stop at an adjacent island and the Goodland excursion was

over, but not until it yielded a wonderful array of species not found at our earlier sites, including: *Conus anabathrum* (Florida Cone), *Conus stearnsi* (Stearns' Cone),** *Strombus pugilis* (West Indian Fighting Conch), *Chicoreus pomum* (Apple Murex), *Chicoreus dilectus* (Lace Murex), *Polia tinctoria* (Tinted cantharus), *Calotrophon ostrearum* (Muave-mouth Drill), *Tellina lineata* (Rose-petal Tellin), *Argopecten irradians concentricus* (Bay Scallop), *Tagelus divisus* (Purplish Tegulus), *Solen viridis* (Green Jackknife), *Trachycardium muricatum* (Yellow Pricklycockle), *Periglypta listeri* (Princess Venus), *Globivenus rigida* (Rigid Venus), *Semele proficua* (Atlantic Semele), *Macoma tenta* (Elongate Macoma), *Chione cancellata* (Cross-barred Venus), *Tellina similis* (Candystick Tellin), and *Anomia simplex* (Common Jingle). There were abundant pairs of *Trachycardium egmontianum* (Florida Pricklycockle) - including an albino.

Heading northward again to Sarasota, we stopped on the way at the Bailey-Matthews Shell Museum on Sanibel Island. There, by Peggy's special arrangement, we were able to meet with Dr. José Leal, the curator, and have a behind-the-scenes tour that featured the museum's project to encourage school children's involvement in shell study and collecting. Ed Frayer's special interest in birds led to our driving through the Ding Darling bird sanctuary which enabled us all to add to our life lists such spectacular avian species such as Roseate Spoonbills, Great Blue and Greenback Herons, Belted Kingfishers, Red-bellied Woodpeckers, Pied-billed Grebes, Double Breasted Cormorants, Anhingas, and a number of others.

King Crown Me

Our final morning was spent shelling huge grassy flats and oyster beds extending in the low tide way out into Sarasota Bay. The morning was gloriously nippy and bracing with bright sun and deep blue sky, although we shivered under our parkas until our concentration on shells and the wintry sun warmed us. "Look for large Crown Conchs," Peggy suggested as we all scattered, and for tiny species hidden in the empty clam shells the whelks have eaten." There were huge whelks and tulips everywhere and we were able to observe the eternal cycle of nature from life to death as we saw shells both laying eggs and eating each other. Following Peggy's advice, I began scanning the dead bivalves. Soon I found Gulf oyster drills, *Eupleura sulcidentata* (Sharp-rib Drill) and Gulf dove snails. There were also *Dosinia elegans* (Elegant Dosinia), Button Snails, *Cerithium muscarum* (Flyspeck Cerith) and on the minuscule side, *Turbonilla conradi* (Conrad's Turbonille),**

Pyrgocythara plicosa (Plicate Mangelia)** and Peggy's *Lyonsia floridana* (Florida Lyonsia).

The really large Crown Conchs didn't seem to be out this day, but I found two fine, unusual curly spined specimens, which was easy consolation. Also interesting were the knobless Lightning Whelks special to this area. I was thrilled when one of my Gulf Oyster Drills turned out later to be albino.

A Millennium Miracle

There were two incredible aspects to this trip and to the shell finds. One, gratifyingly, was the sheer quantity and vitality of the marine life; the other was the range of color and sculpture of the mollusks.

In my many years of periodically scanning Florida beaches, I have *never* seen so much exposed area to explore and so much vibrant sea life. You could even hear it as you trudged gingerly across a flat - little hisses and poppings; a tiny squirt of water, a subtle sense of movement nearby. A crusty Horse Conch turned out to be living shell haven, four Gulf Oyster Drills living on it, while inside was a pair of Common Jingles, and several *Crepidula*. The sheer abundance of so many species allowed a great deal of selectivity. One could look over a specimen and decide whether it would add a new dimension to one's collection, or whether it would be best left. How wonderful to be able to collect such superior specimens while leaving so much shell life behind.

The utter beauty and variety of these classic Florida shells really hit me after I got them home and cleaned, a process that has transformed the earthly into the celestial. Two slimy pairs of cockles have turned out to be stunning *Trachycardium muricatum* (Yellow Pricklycockle) - each valve suffused with varying shades of yellow deepening into orange and speckled with reddish purple flecks. The *Tellina radiata* (Sunrise Tellin) are a deep, dark pink. One of Clare's Bay Scallop pairs is as orange as a citrus grove fruit, rather than its usual gray, and to me this, along with the red tulip, are the shells-of-the-trip!

The Florida Fighting Conchs filled my every hope for color variations: one of them is as unique in coloring as the sunrise above Goodland, as if it were a mirror. The body whorl of the shell is whitish orange, and the aperture is white with a splash of lavender. Other shellers found them with purple and white apertures. I also found that I had a perfect light orange West Indian Fighting Conch. Large dead Lightning Whelks, crusty and slimy on the flats, cleaned up are handsome with their shiny orange, and purple and white, apertures. A lovely pair of tulips has slender orange stripes as well as the customary dark bands. Several Apple Murex had

purple, rather than the usual orange, apertures. The Lettered Olives were especially shiny and richly marked; those from Goodland had a deep golden cast. And I could go on and on.

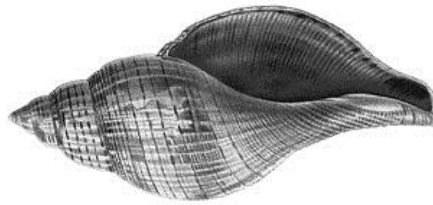
Home Alone

I've developed a new strategy with which to combat "post-shell trip" depression induced at the thought of having to return north - stay over an extra day. I nipped out by myself to Longboat Key just as the tide was turning on this wintry Florida day. At the edge of little sand spit, live whelks and strombs poked out. Along the beach were incredibly, six pairs of *Macrocallista maculata* (Calico Clam) and more pairs of *Plicatula gibbosa* (Atlantic Kittenpaw) than I have ever found in a lifetime of shelling. Just washing up was a 2-inch fresh dead Eastern Auger. On another flat, olive trails and the distinctive sand humps of White Baby Ears accompanied a huge colony of Florida Fighting Conchs. Completely fulfilled with my finds from the trip, I felt no need to take any of these live shells - it was uplifting just to look at them thriving.

Finally, and regretfully, to the airport. Tucked in my window seat, I followed the Gulf of Mexico coastline as the plane flew North. Looking down, soon I saw a silhouette of land that was unmistakable - Cedar Key! Extending way outward from the curled spit of land, brownish under the shallow blue-green water, was the sand bar that we had shelled the first day. Still there! I smiled to myself, and, as the plane veered to the right back over land, I turned away from the window.

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**Common names not listed in Turgeon, D. D., J. F. Quinn, Jr., A. E. Bogan, E. V. Coan, F. G. Hochberg, W. G. Lyons, P. M. Mikkelsen, R. J. Neves, C. F. E. Roper, G. Rosenberg, B. Roth, A. Scheltema, F. G. Thompson, M. Vecchione, and J. D. Williams, 1998. Common and scientific names of aquatic invertebrates from the United States and Canada: Mollusks, 2nd edition. *American Fisheries Society, Special Publication 26*, Bethesda, Maryland, U.S.A.



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