Vol. 43, No. 2, June 2015
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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.

AMERICAN CONCHOLOGIST, the official publication of the Conchologists of America, Inc., and issued as part of membership dues, is published quarterly in March, June, September, and December, printed by JOHNSON PRESS OF AMERICA, INC. (JPA), 800 N. Court St., P.O. Box 592, Pontiac, IL 61764. All correspondence should go to the Editor. ISSN 1072-2440.

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BACK ISSUES are available from Doris Underwood, Membership Director. Prices: prior to 1999, $3 each, 2000 to 2008 $4 each, 2009 to current, $5 each; postage extra.

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In This Issue

Front Cover: *Proserpina pisum* (C.B. Adams, 1849), 5.5mm, Jamaica. This tiny landsnail is closely related to nerites and is in the family Helicinidae. Recently some authorities have placed it in its own family, Proserpinidae. In any case, *P. pisum* is a unique snail with its spiny mantle, long body (the head is hidden under the shell), and bright green color. Without the living animal however, the shell is a rather drab translucent yellow-stained white. While not especially rare, few people have seen the living animal. Photo courtesy of an anonymous reader.

Back Cover: *Cymbiola vespertilio* (Linnaeus, 1758), 68mm, the very common but variable bat volute at 40 feet, night, on a black sand slope, Sulawesi, Indonesia, 2006. Photo courtesy of Charles Rawlings.

From the COA President:

Early this year, Doris Underwood let me know that she was retiring from her duties as COA's Membership Director. The COA Membership Director receives membership applications and renewals and actively manages COA membership, ensuring (among other duties) that members receive their copies of *American Conchologist* by keeping the mailing list up-to-date. A resident of Melbourne, Florida, Doris joined the Astronaut Trail Shell Club in 1975, just after moving to Florida, and has been an ATSC officer ever since. Doris has also had a long service history with COA, having joined the organization in 1979, served on various committees, and as Trustee, Vice President, and President. Through her participation in convention auctions and innumerable personal donations, Doris has been a strong supporter of the COA, and in particular of the Academic Grants program. Doris has been replaced in her position by COA board member-at-large, Debbie Freeman, of Englewood, Florida. On behalf of the COA Board of Directors, I want to wholeheartedly thank Doris for her commitment, her hard work, and for almost two decades of service as COA Membership Director.

José H. Leal, Ph.D., COA President

From the editor:

First, my thanks to Doris for maintaining the COA membership list, printing labels, working changes of address, publishing the membership list, and always, always, smiling and laughing and ready to help me work an address problem. Thank you. And, welcome aboard to Debbie. We have already worked address issues together and she will do great as Membership Director.

This issue completes the McGinty article on Cuban landsnails and I hope our readers have enjoyed it. Thanks to Drs. Emilio F. García and Emily H. Vokes for bringing this to COA and to the late (and irascible) Dick Petit for the original discovery and transcription of McGinty's manuscript. After wading through the Cuban landsnails you will hopefully find a bit of variety in the remainder of the magazine. Thank you to all of our contributors. It is great to fill 40 pages and still have material for the next issue. Sorry for those whose articles are delayed - I will get to you.

Shell Collecting in Cuba

November 1930 - part 3

Paul L. McGinty

edited by Emilio F. García and Emily H. Vokes

This is part three of the three part historical account of a collecting trip to Cuba in 1930. This account was discovered unpublished in a museum archive by Richard (Dick) Petit, who was quite interested in the many adventures by Paul McGinty. Dick Petit obtained a photo-copy of this manuscript and re-typed it for possible publication. Dick's untimely death would have halted any possible publication except for the intervention of Emilio F. García and Emily H. Vokes. They edited the MS, which had been transferred to electronic form by Dick Petit, and provided necessary annotation. The result is an exciting and timely historical account of shell collecting in Cuba, 85 years ago. The editors noted in part one:

"As this is a historical account not a scientific paper, no attempt has been made to modernize the taxonomy or the rendition of "scientific" names, which have been left as the author wrote them. There has been a minimum of editorial corrections, principally typographical errors and misspellings, the latter primarily correcting the orthography of Spanish names. Minor additions by the editors are given in brackets. Those of the author are in parentheses. Footnotes are by the editors and provide a few explanatory notes and comments relevant to the paper."

As we drove Maxwell down to the steamer the next morning we followed Menocal Boulevard [*sic*, Malecón] where the surf was breaking with great force against the sea-wall. The pavement was drenched with splashing salt-water making driving rather dangerous. From time to time we could catch a view of Morro Castle where the heavy seas dashed so hard against the great rocky bluff that spray seemed to rise almost to the lighthouse high above. There was considerable joking done at Maxwell's expense as to what his chances were for being seasick for never had we seen it so rough.

We found at the boat dock that one was taxed ten cents for each package which was taken aboard the steamer. Poor Maxwell was rather heavily taxed for he had numerous small packages containing specimens of shells, etc. (Needless to say, we determined then and there to put all of our paraphernalia into as few large packing boxes as was humanly possible.) After completing the always unpleasant duty of bidding farewell and bon voyage we left our good companion collector upon the deck of the steamer. We were all very sorry that he was not going to remain for the remainder of our stay.

The rest of the morning was spent by the remaining members of our party as each saw fit. Shopping was in order for most of us. Dad wanted to get some large cardboard cartons in which to pack our specimens for our own return trip to Key West. The writer had learned from Maxwell of a certain Señorita in the Post Office who had a few copies of the new Capitolio Issue of postage stamps. I had tried to buy some several times before but had always been informed

Morro Castle, or more properly, Castillo De Los Tres Reyes Del Morro, sits at the narrow entrance to the Havana harbor.

that all had been disposed of. Hence, I approached the said Señorita at the stamp window and inquired as to whether she had any of the Capitolio issue. She answered in Spanish something to the effect that all had been sold already. At any rate there were other current stamps which I wished to take back as souvenirs to be added to my collection and asked if she could supply these. As I was about to make payment she suddenly seemed to remember that she had "un Capitolio." Only "uno." Diving into her pocketbook she pulled forth a pair of each of the stamps in the series. They were very carefully wrapped in wax-paper as if she had intended to save them for some collector friend. Carefully she tore off one stamp of each denomination and gave it to me. When I

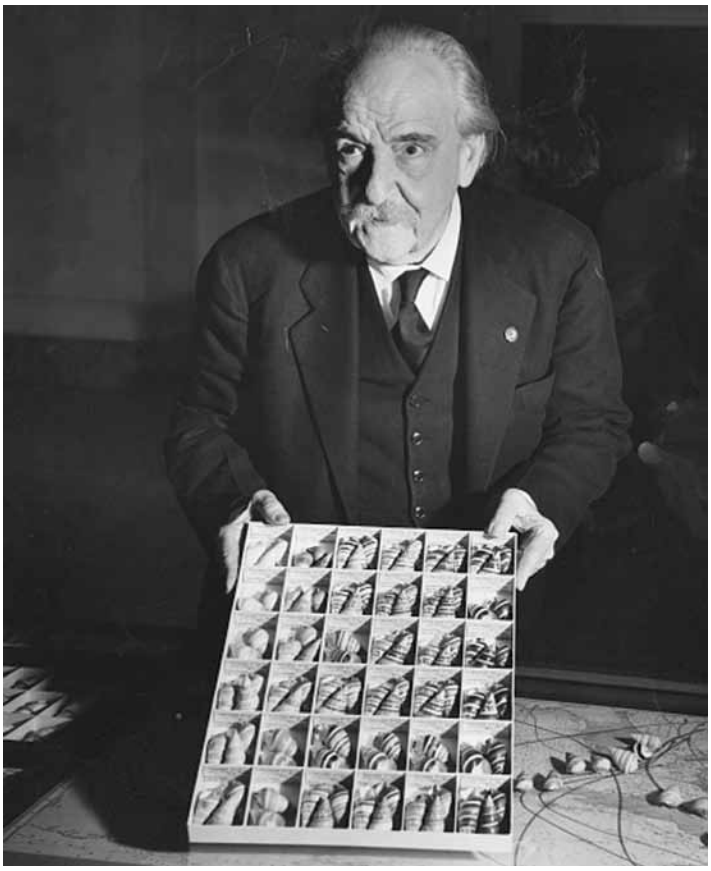
attempted to show my appreciation of the favor by offering her more than the face value of the stamps she refused to accept but the marked value. I thanked her as best I could but not forgetting that it was old Maxwell with his winning way with the ladies who had directed me to her.

We purchased bread, pastry, and a generous slice of Eiderdam cheese at a shop near our hotel and ate our lunch in our rooms. It certainly tasted good, especially the cheese.

In the afternoon we all called on Dr. Bermúdez at his home and found Dr. Torre there. Bermúdez' brother, a physician, had given him injections for sciatica and had greatly relieved his discomfort. Bermúdez told us, Dr. Torre acting as interpreter, that he had never had any sciatica before and had tramped all over the island from one end to the other. That Sitio Perdido was a jinx for him. He had been there on three different occasions and each time had been taken sick! We were all more than glad to learn that it was nothing very serious and that after a few days of rest he would probably be up and around again.

The evening was spent with Dr. Torre at his home where shell talk was of course in order. Returning to the hotel later we found a telegram from our Matanzas friend, Sr. Portuondo, stating that he was ready to go with us on a trip to collect shells the next morning at 9 AM. This was most welcome news for a most interesting trip to the quaint city of Cárdenas lay in store for us.

We were off by 7 AM for Matanzas and upon arrival found Portuondo making last minute preparations to leave with us. He produced a giant sack full of *Cerions*, thousands of them and mostly of one variety, which he had collected for us since we had last seen him. We thanked him heartily but wondered what we would ever do with so many duplicate shells! About an hour after our arrival Portuondo was ready and we started for Cárdenas, which is about 35 miles beyond Matanzas. The drive took us thru a section devoted almost entirely to the planting of sugar cane. Great plantations bordered the road on either side and as far as the eye could reach could be seen the waving tops of the green cane. Occasionally we passed thru some sleepy little village, generally with a mill nearby where the cane was converted into sugar. Most of these mills were at some distance from the main highway but were clearly visible with their tall smokestacks silhouetted against the sky. An hour or so was lost in reaching Cárdenas because of taking a wrong road but outside of such a minor mishap nothing occurred to mar our joy. Frequently we paused to search for *Liguus* but found none until we were almost in sight of the city of Cárdenas. About a mile south of the town some very large trees bordered the road and someone sighted a *Liguus* upon one of the trees. A search disclosed more specimens of a very handsome *crenatus* shell with narrow green bands. (Station #51) Soon the available specimens had all been taken from the trees alongside the road and our party one by one made its way over the high stone fence to a field beyond, in which many more large trees were growing and quantities of well fed cattle were contentedly grazing. In this pasture collecting proved better and shells were even found crawling in the heavy grass as well as upon the trunks and limbs of the trees. We even found a few specimens living upon a very



Dr. Carlos de la Torre y Huerta (1858 - 1950) with a tray of Cuban *Liguus*. He was President of the University of Havana and collaborated with Smithsonian scientist Paul Bartsch, donating many specimens of Cuban mollusks to the Smithsonian's U.S. National Museum. Courtesy of the Smithsonian Institution Archives: www.siarchives.si.edu.

villainous cactus-plant which was growing along the fence, a rather good means of discouraging trespassers. It might be said that we noticed these heavy thickets of cactus with a bit of regret for we never knew but what a bull would decide to make a charge upon us. Worse still for perhaps the owner of the farm might appear upon the scene with other than joy in his heart, maybe a rifle under his arm. Luck was with us, however, for the collecting progressed splendidly with no interference. It is of interest to note that we found numbers of the shells which had been stepped upon by the grazing cattle and pushed down into the soil but remained quite undamaged by the experience! Most Cuban *Liguus* shells are much stronger than the Florida varieties and these from Cárdenas were unusually strong.

As we entered the city, soldiers stopped us and carefully examined our credentials before allowing us to proceed. Cárdenas proved to be a most interesting and attractive Cuban city. Really quite different from any of the other Cuban towns that we had visited before. It struck us that the occupants of the houses took more interest in the external appearances of their dwellings. Usually in Cuba even the better residences are built very close to the sidewalk and no attempt is made to beautify the entrance or external appearance of a dwelling. Upon entering, however, one was quite likely to find excellent furnishings and a beautiful patio garden for such is the oriental practice in home building. Here in Cárdenas were many exceptions to the rule for many of the better homes had fine lawns shaded by great Mango trees, attractive shrubbery and colorful flower gardens. The effect was very pleasing indeed. There was only one thing that we did not like about Cárdenas and that was the roads. Never had any of us seen such poorly maintained streets in a city. Even on the main street the road was so full of holes (not little "chuck-bumps" but the kind that make your car "hit bottom" if you try to make any speed) that most everyone drove upon the street-car track. We tried this ourselves and found it much better than staying upon the roads altho one had to exercise great care for in places the rails were elevated about six inches above the road and quite a bump resulted if one "left the track."

First of all in Cárdenas we decided to have more air put into our tires in an attempt to minimize the bad effects the terrible roads would be sure to have upon them. We paused at a garage and had just started putting in the air when a Cuban youth of about 16 dashed out, grabbed the air-hose from us and before we knew what had happened he had put so much air into the tire that it exploded with a loud report! Portuondo became very excited and insisted that we should have the garage-man put in jail for allowing such a thing to happen. A large crowd formed about us and seemed to enjoy the discussion between Portuondo and the garage-man. Portuondo was our spokesman and never was there a more loyal one! He became so angry with the man that Spanish was pouring forth faster than one would have thought the human tongue could operate. His explanations to us in English about what he was doing were almost as fast. I do not think that I have ever heard anyone who could speak quite as fast as Portuondo could, anyway. Finally a settlement was made with the garage-man and he sold us a new inner-tube at a reduced rate and we were on our way again.

At a small eating place we had a lunch consisting of beer and some kind of sandwiches very much resembling our "hamburgers." Portuondo had taken the whole affair about the tire very much to heart and as the waiter brought us our tall glasses of foaming beer Portuondo took his finger and slopped off the foam upon the floor saying at the time that he didn't care what he did in this damn town where they treated his American friends so badly by blowing up their tires. He had a friend in Matanzas who owned a garage and had seen him blow up hundreds of tires and had never seen him make an explosion. When the sandwiches came and everyone was busy eating, Portuondo casually remarked that this "cat-meat" was better than "dog-meat." "Yes. I sink zis is cat-meat, I sink so." That reminded him of a long story about how he had not touched meat of any form for eight months because one evening he had discovered a "malignant cancer" in a piece of beef while slicing it for a sandwich. This was the first meat he had touched since then, he said. Portuondo was full of such queer tales and amused us constantly with such discourse.

At another time he told us about his first drink of Coca-Cola. It seems that while he was living in Jamaica he and a friend had become very thirsty and could buy nothing at a certain store but Coca-Cola. Portuondo was sure that he wouldn't like the drink but acting upon his friends advice he decided to take the bottle, close his eyes, and drink it down. He did so and after the last swallow had gone down he felt something in his mouth. "What you sink?" he would say in telling the story, "There I am masticate in my mouth two great big, what you call ze cock-roach! Zen I mus' go buy whole bottle of ze Listerine and all day must go along gurgle-gurgle-gurgle. Even zen I could not get rid of zat terrible taste. Oh, poof, I sink so." In telling this last part he would throw his head way back and give a very good imitation of a person gurgling.

At another time while we were driving over a particularly bad section of the road he remarked that his liver was saying to his stomach, "Why ze hell you bump around so much for? And zen ze stomach says, 'What ze hell you tink? I can no help it. It's these damned Cuban roads.' " He had thousands of such stories upon the tip of his tongue and kept us laughing most of the time. The way he told them was most amusing. Always he spoke so fast and continued talking without taking time out for a breath. At the conclusion of telling one of his episodes he would usually become so excited that all he could say would be a high pitched cry

sounding something like "poof" and with a great shrug of his shoulders he would heave a sigh and draw in sufficient breath for the next story.

First of all we decided to visit an American (Dr. Robert Wharton) who was running a Presbyterian boys' school here in Cárdenas[9]. Dr. Torre had given us his name and told us that he was interested in shells. He treated us very cordially taking us into his home and showing us the greater portion of his collection. It was not a very large collection but was very nicely mounted and kept. He directed us to the Museum Building where we spent an hour or more viewing the many interesting relics. Among them was a garrote. There was also an interesting collection of shells on display. They had been presented to the City of Cárdenas by an aged collector, Sr. Blanes[10]. The building of this collection had been a life work and had been done entirely thru the medium of exchanges. (Later we visited the aged Sr. Blanes in person.) This is really an unusually fine museum, especially considering that the city is not large.

From the Museum we drove to the home of a Sr. Sosa, a conchologist whose name had been given us by Dr. Torre. Sr. Sosa proved to be a very pleasant chap who took pleasure in showing us his collection. Dad was presented with a number of forms which we had been unable to collect for ourselves so far. Also we met his wife and little girl who had some interest in shells too. When we bid them goodbye he presented us with a paper sack full of a kind of Cuban fruit. They looked somewhat like pine-cones [? *Annona reticulata*, the custard-apple] and proved a bit too sweetish for our tastes.

It was getting late by this time so we had to hurry if we were to call upon old Sr. Blanes. We felt that perhaps the old man would appreciate a visit from some foreign conchologists for we had heard that he led a rather lonely life. After considerable difficulty in locating his home we succeeded in finding it. The old man was propped up in bed and seemed so glad to see us all. He spoke very little English and since our Spanish was also very limited we could not converse together very freely. He showed us proudly some shells in closed mason-jars which friends had given him since his confinement. Poor old man. We felt very sorry for him but were glad that we had taken the time and trouble to look him up for it seemed to cheer him to have callers.

We made our way back to Matanzas to have dinner at the hotel at about 8 PM. From the hotel we repaired to the home of Portuondo where the exchanging of shells was in effect until about 10 in the evening. We were all a bit tired after a strenuous day when sometime after 1 AM we returned to our Maison Royale in Havana.

The following day was less strenuous. Bud and I spent the morning in our rooms cleaning specimens. Tom and Dad spent the morning at the Museo Poey getting shells from Dr. Bermúdez who was well enough by this time to be around. Making a curating laboratory of one's hotel room certainly has its drawbacks as Bud and I were to find that morning. It seems that the gathering of the specimens had been going on with such fervor that we had not been able to clean the animals from the shells as fast as we took them and many specimens having been dead for quite some time had taken it upon themselves to become rather odoriferous. While we were hard at work upon a batch of snails of this riper variety who should knock upon our door but the Maître d'hôtel and request permission to show our rooms to a couple of American ladies who were considering taking them over upon our departure. With hasty cries of "Un momento, un momento," Bud and I quickly pushed all of the odorous shells under the beds and made a frantic effort to tidy the room. Things looked all right when the ladies came in a moment later but alas, the telltale odors we could not remove. With their heads held very high the two elderly ladies marched thru our rooms and directly out again, not a word was spoken but we doubted if they chose to take our quarters after all.

Finally the hectic morning was over and the vilest of the specimens had been taken care of. At about this time the rest of our party came leisurely back to the hotel with Dr. Bermúdez for noon dinner. The afternoon and most of the evening we spent with Dr. Torre at his home, visiting and of course discussing shells as usual. Dr. Torre told us that Bermúdez wished to take us upon a trip in the morning. It was planned that we should include collecting at Madruga in the day's work.

We picked Bermúdez up at his home at about 7:30 in the morning and were soon rolling eastward over the Carretera Central towards Matanzas once more. This road was becoming quite familiar to us by now for we had been over it, at least part way, on four previous excursions. We did not stop to collect much upon the way this time but kept right on driving past Loma Camoa, Jamaica, and at Ganuza we took the Central Highway towards Matanzas. After driving for some time we could discern the hills near Madruga. Just past the little village the road makes a sweeping curve around some of the largest hills and here it was that we planned to try our hands at collecting. Dad promised to stay behind near the automobile with Bermúdez and to keep him from being too active for we didn't want him to have another attack of that painful illness. In fact, we had hesitated about taking Bermúdez at all but he had seemed so anxious

9) One of the editors (EFG) attended this school in the early 1950s. "Sr. Sosa," mentioned a few lines later, had become by then Dr. Sosa. He displayed a collection of Cuban land snails in the lobby of the school.

10) F. E. Blanes worked mostly on Cerionidae. He described several new species in that family.

to come and had agreed to spend most of his time resting in the car that we agreed to make the trip.

At first the going was rather steep and difficult for Bud, Tom and I for we wished to strike in some distance before starting to collect in earnest. After considerable stiff climbing and struggling with the brush which obstructed our way we reached a larger hill and after climbing upon its sides decided that here should live the snails which we sought. A diligent search disclosed a few specimens and thinking that perhaps more lived higher we climbed up and up the hillside. We were fairly well scattered by this time but within easy hailing distance of each other. (This was a practice which we always followed for fear of an accident to some member of the party.) Suddenly the writer was surprised to hear voices shouting from a clear space far below. Looking down from my rocky perch, I had a bare hand-hold upon the steep hillside, I saw a group of men. They were shouting and waving their arms as tho in great anger. I was much surprised to find anyone back in this region but concluded that we must be trespassing on private property. What they shouted was in Spanish and meant nothing to any of us so not knowing what better to do we waved to them and shouted back a friendly "Hallooo." An instant later there was a terrific explosion which almost dislodged us from our perches and suddenly rocks and pebbles were raining down all about us. We held close against the hillside and fortunately none of us were hurt by the falling debris. It had been a very startling experience, to say the least, and now we realized that the men were trying to warn us that a blasting charge was about to go off. It really is much safer if you understand the native language of the country you're traveling thru. I do not need to add at this point that we very quickly evacuated from that place of peril and sought our shells elsewhere keeping always a weather-eye open for signs of more blasting. Several times we thought we heard a hissing sound nearby and imagined that it might be a long powder fuse burning its way down towards the charge. Such moments were rather unpleasant but since there were more shells which we wished to collect we goaded ourselves onward. It was encouraging to note that there had been no other explosions save that one violent one. Finally at a spot quite well away from the road we found a number of *Urocoptis*, *Chondropoma*, etc., but search as we would we could only find one or two *Liguus* altho the locality seemed ideal for the tree snails. The *Liguus* were quite similar to those we had taken before in Matanzas.

Upon returning to the car we found Dad and Dr. Bermúdez patiently awaiting us. They had found a place alongside the road where the new *Urocoptis portuondoi* Torre had been quite plentiful. Also, they had taken the car upon a little side road leading northward to a little town called Aguacate and had found *Liguus*; both *fasciatus* and *crenatus*. We called this habitat our #54 and the station in which we had collected upon the hill #55.

***Liguus fasciatus crenatus* (Swainson, 1821) was named by Swainson as *Achatina crenata*, and although thought by some to be an albino phase of *L. fasciatus*, it occurs in discrete colonies in the Havana Province (divided in 2011 into the provinces of Artemisa and Mayabeque).**

Pausing at a little town on the road back we had our lunch. A man was selling hot tamales and we decided that we must try them. They proved to be quite good. Tasted quite like cornmeal well spiced and cooked until it was quite stiff. They are served in a wrapper made of corn-husks and kept quite warm before serving.

Bermúdez suggested that we leave the main highway at a little station called Cuatro Caminos, just west of Jamaica, and drive southwards to Managua. Frequent stops were made along the country road and numbers of *Liguus* were found upon the roadside trees, also a few specimens of *Cepolis* were taken. The *Liguus* were both *crenatus* and *fasciatus* and we called this our station #55a.

Arriving at Managua after a slow ride over the bumpy country road we turned to the right and headed for Havana. But a short way out of Managua we saw more *Liguus* living upon the trees bordering the road. This was indeed an interesting find for some of the *Liguus* (a *fasciatus*) very closely resembled the *Liguus murreus*. We took a number of these *Liguus* which did not particularly resemble the *murreus* but were most interesting because of their unusually large size. This was our station #56.

There had been so many pauses to collect and the roads had been so bumpy over the last part of our journey that it was past six o'clock when we returned to our hotel in Havana. Dr. Bermúdez was our guest for dinner. Arrangements were made that evening to have him take us on the next morning to the habitat of the *Cerion johnsoni* near the city of Mariel. Since our stay in Cuba was drawing so near to its conclusion and Dad and Bud had more shopping to do

it was agreed that only Tom and I would go with him.

Thus, it was with a fairly early start the next morning that we headed the little blue Chevrolet towards the west. Following the Central Highway as far as Guanajay we passed many familiar sights and it was with real regret that we admitted to ourselves that this trip was by necessity to be the last one of our expedition.

At Guanajay we turned off to the right and took the road for Mariel. We found *Liguus fasciatus* living upon the trees and bushes alongside this road quite close to Guanajay and paused a number of times to collect. (#57)

Mariel[11] proved to be an interesting little city located upon an admirable land-locked harbor. Bermúdez directed us to follow the road which skirted the edge of the bay upon the east side, and while this road proved to be extremely bumpy there were so many sights to interest us that we scarcely noticed the bumps. We passed the buildings of the Cuban Naval Academy which is situated upon a truly beautiful spot high upon a hillside overlooking the bay and quite surrounded by trees. We also passed a large cement factory which judging by its size bids fair to be one of the town's principal industries.

Finally after we had driven to within almost a half-mile of the lighthouse which marked the entrance to the harbor Bermúdez pointed to a trail leading off to the right and signified that this led to the habitat of the *Cerion johnsoni*. The car was parked a bit off the road and we started walking down the trail. We had not been walking long before someone discovered a baby *Liguus* living upon one of the scrubby little trees alongside the path. A search soon uncovered a number of adult shells altho they were far from plentiful. Both *fasciatus* and *crenatus* shells were taken and with an extremely variable range of coloring. The predominating shell was one with a yellowish background with blotches of smoky-blue or slatish gray color but there were also white shells with delicate green bands. Some of the shells had the characteristics of both of these forms to some degree. We found one beautiful specimen which when alive and moist was of such a deep and almost solid orange color as to appear like some red flower growing upon a twig. The shells proved to be quite scarce and in order to find any specimens at all it was necessary to make a careful search. It was certainly a most unlikely looking spot to find *Liguus* for none of the trees were much more than large bushes and it could not have been more than a hundred yards to the beach. This is no doubt the reason no one else had ever discovered *Liguus* living here. This shell proved to be quite new and Dr. Torre suggested the name *Liguus pictus mcgintyi* be applied.

Upon the beach nearby and confined to that area just above high-water we found the *Cerion johnsoni* to be living. They were a most peculiar form inasmuch as the shape of their shells varies greatly from that of the average *Cerion*. They were the deadest looking things imaginable with the exteriors of their shells having that worn and porous appearance of dried out old bones. The distribution of this *Cerion* is confined to this very limited area. To test the truth of this statement the writer decided to walk slowly along the beach and notice whether the number of the shells really diminished. As a matter of fact I was astounded to find that before I had gone a hundred yards no more of the shells could be found at all (#58 *Liguus* and *Cerion johnsoni*).

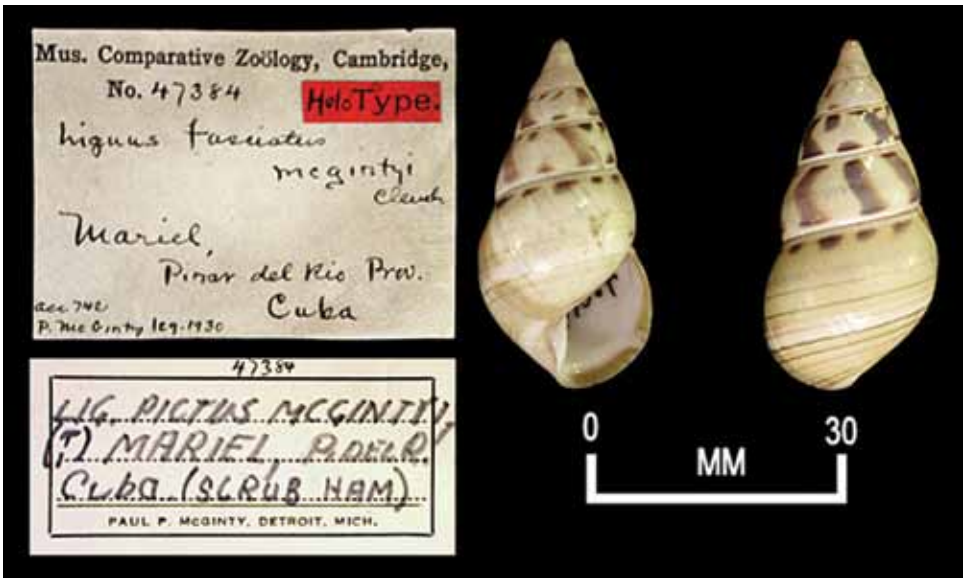
We returned to our car and drove the remaining short distance to the lighthouse (Faro de Mariel) and upon the beach nearby found another *Cerion* (*marielinum*) to be living. This lighthouse is really worth mentioning at this moment because of its peculiar appearance. It is a circular building extremely large in diameter in proportion to its height. In fact it looked very much like a great cheese-box and judging by the size of the light on top one might add, like a cheese-box with a candle burning on top, altho about this I cannot say with any degree of assurity for we never saw it while lighted. After gathering a sufficient quantity of the *Cerion* here we turned the car about and started upon our return.

Almost immediately after starting back a *Liguus* was sighted upon a tree to the right of the road. This was also a new habitat for *Liguus* and after carefully searching for some time we succeeded in taking a few specimens (#60). They were a *fasciatus* but quite unlike the *Liguus* we had taken near the *Cerion johnsoni*, i.e. *mcgintyi*. This was extremely strange to note for I doubt whether these two localities were more than a mile apart.

As we drove slowly along watching for more *Liguus* upon the trees we were fooled several times by *Cerion marielinum* which seemed to live further removed from the water than any of us had seen *Cerion* before. They were also fond of attaching themselves to the trunks of the trees and were really quite good climbers. Every now and then someone would shout "*Liguus*" and when the car would stop, rush out to find only a specimen of this *Cerion* clinging to the trunk of one of the small roadside trees.

Hunger being upon us, we finally decided to cease collecting and return to Mariel for some lunch. Bermúdez ordered sandwiches for us and when they came we were very

11) The town of Mariel is perhaps best known for the "Mariel boatlift" when between 15 April and 31 October 1980, perhaps as many as 125,000 Cubans departed Mariel Harbor in some 1,700 boats bound for the U.S. The Carter administration initially welcomed the refugees with open arms until it was learned that Castro had also emptied out the prisons and mental hospitals to rid Cuba of "undesirables." Most of the refugees were ordinary Cuban citizens and the exact number of "undesirables" was never really established, but tensions increased between the two countries and the boatlift was ended.



Dr. Torre's suggestion that the newly discovered *Liguus* be named after McGinty was taken to heart by Clench. This is the holotype of *Liguus fasciatus mcgintyi* Clench, 1934, from Occ. Papers Boston Soc. Nat. Hist., v. 8, p. 116, pl. 7, fig. 10. As can be seen on the lower data slip, the name originally applied (and recommended by Dr. Torre) was *L. pictus mcgintyi*, but *L. fasciatus pictus* (Reeve, 1842) (originally *Achatina pictus* with a type locality of Cuba) was considered a Florida (Big Pine Key) *Liguus*, despite Reeve's type locality. So the Cuban shell became *L. fasciatus mcgintyi*.

agreeably surprised. A Cuban sandwich is almost a meal in itself for these sandwiches are composed of about half a loaf of bread, four or five different kinds of meat, (each with a generous portion, too) pickles and lettuce, and whatever else happens to be on hand when the cook gets the order. Along with the sandwiches we each had a bottle of that most excellent Cuban drink called "Jupiña."

It being quite early when we reached the Central Highway again we decided to try once more to find a few specimens of *Liguus murreus* upon the Guayabal road which turns off to the south of the Central Highway not far from Peña Blanca. We kept our eyes open as we drove slowly along, ever on the alert for *Liguus*. Near Guayabal we found a few specimens of a *Liguus fasciatus* (#61) and also near La Catalina (#62).

By mid-afternoon we were back in Havana again and upon driving Dr. Bermúdez to his quarters found Dr. Aguayo waiting there for him. Aguayo was very much interested in seeing the specimens of the new form of *Liguus* which we had found and was very much pleased when we presented him with a number of the shells. Later when we met the rest of our party back at our hotel and showed them what we had discovered they too were most enthusiastic. Upon showing the specimens to Dr. Torre that evening he assured us that this was truly a new form of *Liguus* and suggested the name *Liguus pictus mcgintyi* . We gave him a number of our specimens for his own collection. Dr. Torre suggested that we send samples to Mr. Clench at Harvard Museum and allow him to name it for us. It was a most peculiar coincidence that upon the very last collecting trip that we were to make we were destined to uncover the real find of our entire stay upon the Island of Cuba.

In the morning Dad and I went over to the Museum to visit with Dr. Bermúdez and to get some photographs of him to take back with us. He was very obliging and posed a number of times for us and then too, gave Dad a few more shells for his collection. Tom and Bud had remained at the hotel and worked all morning on the packing of our specimens preparatory to our trip back to Boynton. Dad and Tom spent the afternoon with Dr. Torre at his home where he gave them some more very rare shells. Bud and I did some more packing while they were gone and then in the evening all hands kept busy with still more shell packing. I guess we all packed shells in our dreams that night!

The next morning we all went down to the office of the steamship company to get our papers in shape for leaving Cuba and to pay our head-tax of three dollars per person as was required of all aliens upon leaving the country. In the afternoon we all made a call upon Dr. Torre and attempted to thank him as best we could for his wonderful kindness and help in making our expedition a real success. Dad and Tom visited with Dr. Aguayo at his home after our dinner that evening while Bud and the writer worked upon more of the shell packing. When the others finally returned we put them to work packing and everyone kept busy until about 1 AM at which time one by one they all slipped off to go to bed leaving the writer working on until four o'clock in the morning. Finally things were pretty well in shape for our departure and I too "hit the hay."

At 8:30 AM we loaded our little car to the "gunnels" with various packing boxes filled with shells, our personal baggage and four passengers. Upon arriving at the dock we had the expected difficulty in getting our packages on board the steamer. We had thirty or more packages to take aboard and there was a mad rush by the porters to get the allowed ten cents per package, loaded on board. We could see no reason why three able bodied young men should throw away three or four dollars to carry some light cardboard packages about fifty feet. Then too we didn't want any of the bundles to be lost in this mad rush of porters all about us. Everything had to be taken out of the automobile before the steamship people would transport it so we had quite a pile

before us. By working in relays we finally succeeded in placing all of the luggage before a gate just in front of the gang-plank but try as we would we could not get anyone to open it up for us. At last admitting defeat we made a compromise with one of the porters to carry our luggage thru the gates and over the gang-plank of the ship, a distance of perhaps twenty five feet, for the bargain price of 50 cents. It must have been a very queer sight to the passengers upon the steamer to see us trudging up to our staterooms with all of this baggage for we were afraid to leave the valuable shells down below with the ordinary baggage. Bud had brought along a large Navy duffle bag and now as he trudged up to his stateroom with the great sack bulging to the limit he must have seemed quite a strange tourist! At any rate, to judge by the curious glances of the passengers we were indeed strange creatures.

Some of the *Liguus flammellus*, collected by McGintyi in Cuba. From left to right: *L. flammellus russelli* Clench, 1935, *L. flamellus flamellus* Clench, 1934, *L. flammellus organensis* Clench, 1934, and the two brown specimens on the right are *L. flammellus carbonarius* Clench, 1934. Photo by Pete Krull and Bill Frank of specimens from the Florida Museum of Natural History; accessible at Jacksonville Shell Club web site: www.jaxshells.org/liguus.htm.

We were all so tired when things were straightened away on shipboard that soon after the steamer pulled out for Key West at ten AM everyone turned into his bunk for a much needed rest. A good sea was running that day and the little "CUBA" tossed around considerably at times but Key West was sighted at about 3:30 PM and the boat docked only to deliver us to the mercy of the US Customs Officers. By this time they were our chief worry for should they demand that we unpack all of the boxes and repack them again it would take about a week of steady work! You see, each shell was individually wrapped in tissue paper to prevent breakage in shipment. When all of our luggage was passed thru with only a perfunctory inspection we were so happy that we could have shouted for joy. Of course we had to wait until the other passengers had been passed thru before the Customs men could spare the time to look over our great pile and it was about 5 PM before we had been cleared.

First of all it was decided to visit Chester Thompson who made his living by operating a marine curio shop in town. He proved to be a pleasant chap indeed and showed us thru his shop which was filled with every sort of curio imaginable. After leaving Thompson's we hunted up a place to stay for the night. Luckily we found very good accommodations at the Robert's House, run by a man and his wife with clean rooms and reasonable rates.

That evening we ate dinner at a small restaurant in town where "home-cooking" was featured and how good the food, real American food, tasted to us after eating for so long in Cuba. The bread actually tasted like cake to us and as for the American cigarettes, well, they were so mild that we could hardly tell that we were smoking at all!

The next morning was spent in collecting upon Stock Island which is the Key just east of Key West. Here we found the rare *Liguus solidus solidulus* Pilsbry, a pale yellowish banded snail, living upon trees bordering the golf course. These shells proved to be quite scarce but we found also living with the *Liguus* another shell, *Oxystyla reses* which at the time was very abundant. A number of *Drymeus multilineatus* were found here also. Mosquitoes were bad here because the land was low and we later learned that "red bugs" made this key their headquarters.

Driving on, we reached Big Pine Key at about 1 PM and since it was on this key that the rare *Liguus solidus graphicus* had been found years ago we decided to put up for the night at the Big Pine Key Inn and make an attempt to see if any of these shells still lived. We were nicely taken care of at the Inn and after transferring a portion of our baggage to our rooms we started upon a futile search for *Liguus*. The Key cannot be covered very well by auto however, and since we did not have long to search we are not yet convinced that this form is absolutely extinct. Somebody may find it living on a remote part of this Key. (No living specimens have been taken in this century.)

One thing of interest upon this Key is a plant in which sharks are utilized to good advantage. A regular fleet

of small boats, which are manned by negroes, is maintained. The sharks caught in nets are brought in to the plant where the hide is made into leather, the liver and insides produce oil, the teeth and eyes are used for jewelry, and the fins are removed and sold to the Chinese who pay fancy prices for these delicacies from which they make a kind of soup. What remains of the sharks is then made into fertilizer and the stench about the place was anything but pleasant!

It was a pleasant evening at the inn after dinner. We visited with the other guests who like ourselves expected to take the ferry for Matecumbe Key in the morning. After an early breakfast, and a most excellent one, we left for the ferry which was only a few miles away. We stopped upon No Name Key to see if there were any *Liguus* but while a few dead specimens with little color left were found upon the ground we could find no living ones here. The mosquitoes were so bad here that all except Tom were obliged to stop searching and return to the car. Mosquitoes never bothered him very much it seemed. (Ferry ran out of No Name Key.)

Soon we were comfortably settled upon the ferry with nothing to do but relax and watch the countless little keys unfold before us as others slipped out of sight to our stern. Time passed swiftly and almost before we realized it one o'clock had rolled around and we were unloading at Lower Matecumbe Key. At last we were really on the road to home for now we could drive directly thru to Boynton. Everyone was anxious to get home again and what tales we could tell!

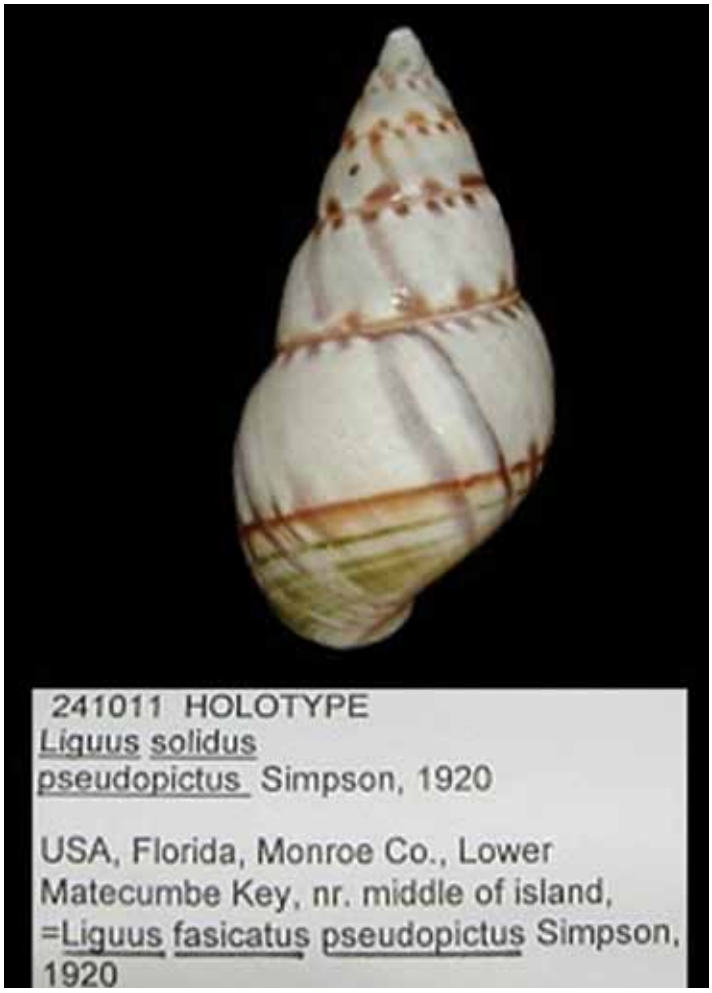
Nevertheless, since it was still fairly early in the day it was decided to spend the afternoon in collecting shells upon this key where a number of *solidus* forms could be taken. With a rapid change of clothing we prepared ourselves in khaki for the collecting and just as we were about to break into the brush a carload of friends who we had made on the boat passed and shouted a farewell. They must have thought it strange that we had so suddenly changed our appearances.

Luck was with us once more for Tom found an extremely beautiful specimen of the *Liguus solidus pseudopictus*. It was what is known to collectors as a "dark *pseudopictus*" and very rare. With this prize and a number of other forms which live here we finally packed up once more for the journey home. We left Lower Matecumbe at about 5 PM and arrived in Homestead in time for dinner there.

The rest of the trip was without incident and it was a happy moment indeed when we entered our home at Boynton that evening. We were expected and there was so much excitement about our return that it was hard to tell whether we were happier to see our folks again or they were happier to have us back. What a glorious time we had!

In closing may I say that if by writing these lines I have provided a way for the members of our party to freshen or keep alive the memories of those pleasant days which we spent together I shall have been well repaid for the effort which setting forth in my own words the tale of our adventures involved. On the other hand should it be possible that upon reading what I have written someone outside of our own party will have formed a desire to visit the sunny Isle of Cuba and see with his own eyes any or all of the many strange and beautiful sights which confronted us, I shall truly feel doubly repaid for my efforts.

[signed] PAUL L. MCGINTY



Returning to Florida, Tom McGinty (Paul's brother) finds *Liguus fasciatus pseudopictus* Simpson, 1920 (then known as *L. solidus pseudopictus*). Shown here is the holotype at the Florida Museum of Natural History, photographed by Pete Krull and Bill Frank, as seen on the Jacksonville Shell Club web site: www.jaxshells.org/liguus.htm.

Appendix to the Cuban Trip

In our rooms at the Maison Royale Hotel in Havana stood a great wooden wardrobe-cabinet. It had ornamentally carved massive doors which opened into the room and stood considerably higher than a man's head. It seemed to be a heaven-sent gift to the conchologists for it was large and roomy inside, allowing plenty of space for the storage

Paul McGinty from the Florida Museum of Natural History archives.

of boxes of shells. Then too, it had a lock and key upon the door which was unlocked only while we were in our rooms.

As time went on the quantity of specimens which we were amassing became too great to properly clean. Eventually it came to pass that upon opening the door to the wardrobe one had to brace both feet in order to prevent himself from being bowled over by a wave of nauseating atmosphere which was sure to emerge. At this stage Maxwell came forward to save the day with the suggestion that we apply camphor-shavings as a deodorant. Each time he opened the door thereafter, Maxwell would sniff cautiously for a moment and then say very seriously, "Yes, I believe that the camphor has the upper hand."

Another incident worth relating took place in the same quarters. It seems that the day's collecting had been quite fruitful and vast numbers of *Cepolis* and *Liguus* shells had been taken. For want of better containers some of the shells had been placed in paper bags. In the middle of the night the writer awoke and upon turning over in bed noticed something dark upon the wall nearby. Cautiously he touched it only to have it fall clattering to the tiled floor. By the sound it made he knew that it was a snail shell and a moment later, with the room lighted, snails were to be seen climbing about everywhere. Their moisture had softened the paper-bags allowing them to crawl away. What a queer sight we must have presented as we attempted to poke the shells from the walls and high ceiling. This was a new experience; collecting shells in one's hotel room while leisurely clad in pajamas!

COLLECTING STATIONS IN CUBA, PAUL P. MCGINTY, NOVEMBER 1930

- Station #1. One mile east of Marianao. Found in old stone ruins under rocks. Friday, Nov. 7, 1930.
- Station #2. Three miles west of Matanzas, *Liguus fasciatus fasciatus* Mull. Typical. Found on Salvadera trees along road. Portuondo, Dr. Torre's friend aids us in collecting. Nov. 8.
- Station #3. Monserrate Hermitage (near), *Liguus fasciatus fasciatus* Mull. Typical. Found on bushes and small trees. Nov. 8.
- Station #4. On road to the Bellamar Caves, *Cepolis bonplandi* Lamk. found on Salvadera trees along road. Nov. 8.
- Station #5. Two miles east of the Bay of Matanzas, *Cerion magister* Pil. & Van. (Found on sea-grape and small bushes near beach) Nov. 8.
- Station #6. Rangel. Pinar del Río Province, Sierra de los Organos, shells given by Dr. Torre.
- Station #7. *Cerion mumia fastigata* Mayn., Vedado, Havana. See #19 (Aguayo).
- Station #8. Miramar, west of Havana, (Almendares) found near sidewalks, *Cerion mumia mumia* Brug.
- Station #9. Opposite Havana Yacht Club, Havana, *Urocoptis sinistra* and *poeyana*, found under rocks on hillside.
- Station #10. Military Yacht Club, west of Havana, *Cerion salvatori* and variety. Under rocks and stones near beach.
- Station #11. At old tower, near Military Yacht Club, *Cerion chrysalis*.
- Station #12. Ceiba (east), *Eutro*. *conica* & *Liguus*.
- Station #13. Capellanías, *Urocoptis*, *oviedoiana.*
- Station #14. West of #13 on Artemisa Road, white *Liguus*.
- Station #15. Las Mangas, *Liguus* on Royal Palm Trees.
- Station #16. One mile west of Las Mangas, *Liguus* found on trees.
- Station #17. Near Candelaria, *Liguus* found on Royal Palms, Gumbo limbo, and telegraph poles.
- Station #18. Peña Blanca, Sierra Anafe, *Urocoptis alleni*, *Chondropoma*, etc.
- Station #19. Santa Clara Battery, Havana, *Cerion mumia fastigata* Mayn.
- Station #20. Rangel, east side of mountain, no live *Lig. blainianus* found. Many other interesting species found here.
- Station #21. Quarry Kilometer 14, Viñales Road, Pinar del Río, Cuba.
- Station #22. San Vicente, north of Viñales, (Los Baños). On west side of road ¾ mile south of the Hotel Baths.
- Station #23. Sierra de Viñales, Cove of Delight.
- Station #24. ¾ mile beyond Cove of Delight, Sierra de Viñales.
- Station #25. La Chorrera (near entrance and on opposite side of road from the Gomez Cave, Viñales).
- Station #26. Sierra de Galeras, north side of river cave. (*Ch. hendersoni*).
- Station #27. Sierra de Galeras, south side near El Abra.

- Station #28. Sierra El Abra, south side ¼ mile from El Abra.
- Station #29. Sierra El Abra, south side and small mogotes one and half miles from pass.
- Station #30. Dos Hermanos, western one. (Viñales).
- Station #31. Dos Hermanos, eastern one (east side towards southern end).
- Station #32. El Queque (El Tumbadero) south-west part.
- Station #33. San Vicente de los Baños, near River Cave.
- Station #34. Near Mogote El Capone. North of Viñales.
- Station #35. El Queque. Starting at south side and climbing to the summit, Viñales.
- Station #36. Rangel Hill, south west side, *Liguus blainianus*, Pinar del Río.
- Station #37. One half mile west of Las Mangas, Pinar del Río. *Liguus crenatus* and *fasciatus* found on Royal Palms, bushes, etc., (Pinar del Río).
- Station #38. Finca La Luisa and east, *Urocoptis* and *Liguus*. Central Highway east of Havana in Havana Province.
- Station #39. San Francisco, *Pleurodonte sagemon*, Station A and B. Havana Province.
- Station #40. Loma Camoa, west side of road, side and summit, Havana Province.
- Station #41. Somorrostro, Camoa, north side of road and opposite from Loma Camoa.
- Station #42. Near Carmen, north and south. *Lig., Ur., Cepolis*.
- Station #43. San José de las Lajas, *Urocoptis*. Hav. Prov.
- Station #44. Loma Candela, *Urocoptis*, Hav. Prov.
- Station #45. Between Güines and San Nicolás, yellow *Liguus*, Hav. Province.
- Station #46. *Liguus fasciatus* and *crenatus* on trees on road from San José and Tapaste. Locality Tapaste, Hav. Prov.
- Station #47. *Liguus fasciatus* and *Cepolis* on trees along road to Mendoza and Jaruco, Havana Province.
- Station #48. #1. *Chondropoma* and *Tudora*, Finca el Aljibe, Hav. Prov. (Mendoza). Also found *Urocoptis* here.
- Station #49. Pozo Bonilla, Sitio Perdido, Jaruco, Hav. Prov., *Ur., Chondropoma, Tudora, P. aricoma aricoma.*
- Station #50. Sitio Perdido, Sierra de Jaruco, *Ur.*, etc., Hav. Prov.
- Station #51. *Liguus crenatus*, one mile south of Cárdenas, Matanzas Prov.
- Station #52. Los Mangos, *Ur. stearnsi* and *Liguus*. Hav. Prov.
- Station #53. West of Jamaica, *Cepolis* and *Liguus crenatus* on big trees. Hav. Prov.
- Station #54. *Liguus fasciatus* and *crenatus* (side road to Aguacate) Madruga, Hav. Prov.
- Station #55. *Urocoptis*, *Chondropoma*, and *Liguus*, Madruga, Hav. Prov.
- Station #55a. *Lig. cren.* and *fasc.,* Central Highway to Managua, Hav. Prov.
- Station #56. *Lig. fasciatus* (some near *Liguus murreus*) Managua to Havana, Hav. Prov.
- Station #57. *Liguus fasc.,* Guanajay, on road to Mariel, Pinar del Río Province.
- Station #58. *Liguus fasc.* and *cren.* (*Liguus fasc. mcgintyi* Cl.) (new locality) also *Cerion johnsoni*, Cueva del Chivo, east of Mariel, Pinar del Río. Prov.
- Station #59. *Cerion marielinum*, Faro de Mariel, Mariel, Pinar del Río Province.
- Station #60. *Liguus fasciatus* and *Cerion marielinum*, on road short way south of lighthouse. Locality near #59.
- Station #61. *Liguus fasciatus,* Guayabal, near Guanajay, Havana Prov.
- Station #62. *Liguus fasciatus,* near La Catalina, Hav. Prov. Cuba.

FINIS

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On the following pages are some (37) of the numerous (75 to 100) *Liguus* species, subspecies, and forms found on the island of Cuba. *Liguus* are found on Cuba, Hispaniola (Dominican Republic and Haiti), and in southern Florida and the Florida Keys. *Liguus* taxonomy is a contentious issue with conflicting opinions in the literature and among "experts." The names presented here are based upon data from old collections, updated, as possible, with more modern references. The names are presented as subspecies within four different species groups (*L. blainianus, L. fasciatus, L. flammellus,* and *L. vittatus*) because that seems to be accepted convention. A fifth species (*L. virgineus*) does not occur in Cuba, but rather in Haiti and the Dominican Republic. Specimens listed with an asterisk (*) were photographed by Pete Krull and Bill Frank at the Florida Museum of Natural History. These and others can be viewed at www. jaxshells.org/cuba.

***Liguus* geographical distribution, from a similar map on www.liguushomepage.com.**

Cuban *Liguus blainianus* (1-6) & *Liguus fasciatus* (7-13)

1. ***L. blainianus blainianus*** **(Poey, 1851) (**45mm) El Retiro, Rangel, Pinar del Río Prov.* **2.** ***L. blainianus fairchildi*** **Clench, 1934** (42mm) Herradora, Cabanas, Pinar del Río Prov.* **3.** ***L. blainianus flava*** **Clench, 1934** (41mm) Cueva del Chivo, N. coast of Pinar del Río Prov.* **4.** ***L. blainianus jaumei*** **Clench & Aguayo, 1932** (47mm) road between Mangas & Candelaria, Pinar del Río Prov. (McGinty collection)* **5.** ***L. blainianus pilsbryi*** **Clench, 1935 (**43mm) Sierra de Rangel (lower reaches), Pinar del Río Prov.* **6.** ***L. blainianus*** **ssp.** ***politus*** **(Torre MS) (**46mm) Sierra de Rangel (upper reaches), Pinar del Río Prov. (McGinty collection).*

7. ***L. fasciatus achatinus*** **Clench, 1934** (48mm) (gray phase) Cuba. **8.** ***L. fasciatus angelae*** **Clench & Aguoyo, 1934** (43mm) Cayo Maja, Santa Clara Prov.* **9.** ***L. fasciatus archeri*** **Clench, 1934** (62mm) Santa Ana **10.** ***L. fasciatus artemisiae*** **Torre (no date, MS?) (**60mm) Habana Prov.* **11.** ***L. fasciatus austinianus*** **Guitart, 1945** (52mm) Sancti Spiritus Prov. **12.** ***L. fasciatus barroi*** **Jaume, 1952** (50mm) San Diego de los Baños, Mogote #10, Pinar del Río Prov.* **13.** ***L. fasciatus caroli*** **Bartsch, 1937** (49mm) Turiguano, Camagüey Prov, N. coast*

Cuban *Liguus fasciatus* (14-25)

14. ***L. fasciatus caribaeus*** **Clench, 1935** (49mm) Esperanza, N. coast, Pinar del Río Prov. **15.** ***L. fasciatus crenatus*** **(Swainson, 1821)** (55mm) Camagüey, Camagüey Prov.* **16.** ***L. fasciatus cubensis*** **Clench, 1934** (50mm) Hoyo de Gallardo, Sierra Tumadero, Viñales, Pinar del Río Prov. **17.** ***L. fasciatus fairchildi*** **Clench, 1934** (48mm) Viñales, Pinar del Río Prov. **18.** ***L. fasciatus fasciatus*** **(Müller, 1774)** (57mm) Mogote del Queque, Pinar del Río Prov. **19.** ***L. fasciatus feriai*** **Clench, 1934** (60mm) Babinez, Holguin, Oriente Prov. **20.** ***L. fasciatus festiva*** **(Müller, no date)** (38mm) Tarara, Habana Prov. **21.** ***L. fasciatus goodrichi*** **Clench, 1934** (49mm) Las Villas, Sancti Spiritu Prov. **22.** ***L. fasciatus guitarti*** **Jaume, 1952** (46mm) Sancti Spiritus, Cagueiras, Santa Clara Prov.* **23.** ***L. fasciatus judasense*** **Jaume, 1952** (60mm) Punta Alegre, Camagüey Prov. **24.** ***L. fasciatus laureani*** **Torre (no date)** (55mm) Macurijes, Pinar del Río Prov. (McGinty collection)* **25.** ***L. fasciatus mariae*** **Clench, 1936** (55mm) Ojo de Agua, Martinas, Pinar del Río Prov. (McGinty collection)*

Cuban *Liguus fasciatus* (26-32), *Liguus flammellus* (33-36) & *Liguus vittatus* (37)

26. *L. fasciatus occidentalis* Torre (no date) (42mm) Guajabon, Sierra Chica, Pinar del Río Prov.* **27. *L. fasciatus pinarensis* Clench, 1934** (45mm) Punta del Este, Isle of Pines. **28. *L. fasciatus salvatori* Torre, 1953** (45mm) Palacios, Pinar del Río Prov.* **29. *L. fasciatus sanctamariae* Sanchez-Roig, 1951** (41mm) Cayo Santa Maria, Caibarien, Villa Clara Prov. **30. *L. fasciatus sissilabre* Nodal, 1947** (60mm) Mogote del Queque, Pinar del Río Prov. **31. *L. fasciatus torrei* Cleanch, 1934** (52mm) Mogote del Queque, Pinar del Río Prov. **32. *L. fasciatus viridus* Clench, 1934** (43mm) Cotorro (?), Matanzas Prov.

33. *L. flammellus bermudezi* Clench, 1934 (50mm) Mogote Cao, Viñales, Pinar del Río Prov. **34. *L. flammellus carbonarius* Clench, 1934** (46mm) Mogote Francisco Pita, Viñales, Pinar del Río Prov. **35. *L. flammellus cervus* Clench, 1934** (45mm) Viñales, Pinar del Río Prov. **36. *L. flammellus flammellus* Clench, 1934** (50mm) Mogote del Evaristo, Iglicia, Viñales, Pinar del Río Prov.

37. *L. vittatus vittatus* (Swainson, 1822) (43-44mm) (the more common (of an uncommon species) sinistral specimen on the left and dextral on the right) Ensenada de Mora, Oriente Prov.

Cuban *Polymita brocheri* (1-5), *Polymita muscarum* (6-10), & *Polymita picta* (11-18)

Like the *Liguus*, the genus *Polymita* (family Helminthoglyptidae) has its share of taxonomic issues. *Polymita* are endemic to Cuba and there are generally six species recognized within the genus; *Polymita brocheri* (Gutiérrez in Pfeiffer, 1864), *Polymita muscarum* (Lea, 1834), *Polymita picta* (Born, 1780) (type species), *Polymita sulphurosa* (Morelet, 1849), *Polymita venusta* (Gmelin, 1786), and *Polymita versicolor* (Born, 1870). Each species then has several subspecies and named varieties or forms. The subspecies and named forms were, with only a couple of exceptions, the work of Dr. Carlos de la Torre y Huerta (1950) in "El Género *Polymita*." *Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey."* Vol XX, No 1: 5-20, plates 1-11, 1950. Dr. Torre, who figures prominently in the McGinty manuscript, was a Cuban naturalist who specialized in land mollusks, Recent and fossil. The six species of *Polymita* are generally accepted, but problems arise

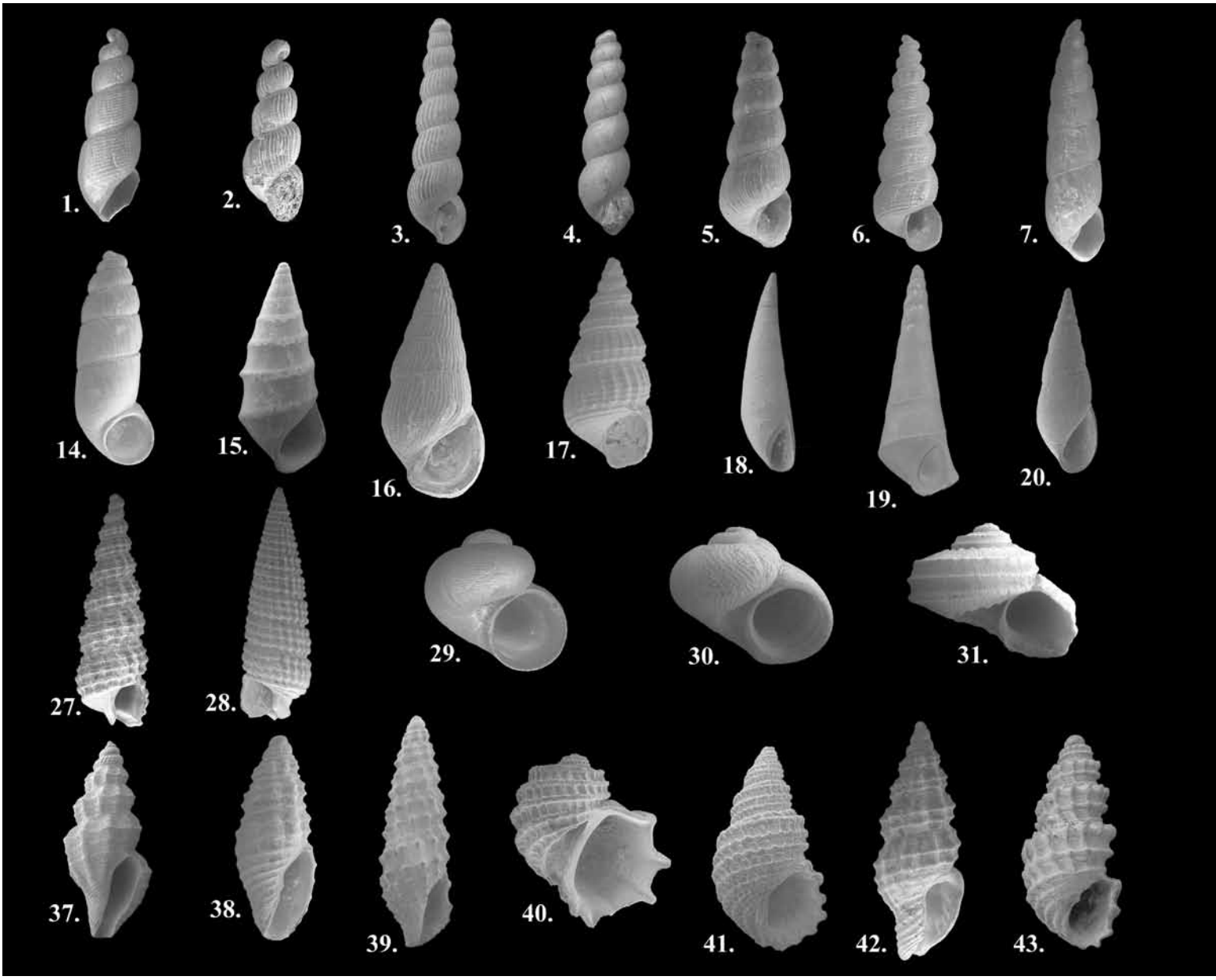
1a,b,c. ***P. brocheri brocheri*** **(Gutiérrez in Pfeiffer, 1864)** 21mm, Baracoa, Oriente Prov. **2a,b,c.** ***P. brocheri brocheri*** **(Gutiérrez in Pfeiffer, 1864)** 21mm, Baracoa, Oriente Prov. **3a,b,c.** ***P. brocheri cuestana*** **Torre, 1950,** 19mm, Maisi, Baracoa, Oriente Prov. **4a,b.** ***P. brocheri ovandoi*** **Torre, 1950,** 18mm, Mesa de Ovando, Oriente Prov. **5a,b.** ***P. brocheri*** **ssp.** 21mm, Baracoa, Oriente Prov. **6a,b.** ***P. muscarum festiva*** **Torre, 1950,** 21mm, Holguin, Oriente Prov. **7a,b,c.** ***P. muscarum muscarum*** **(Lea, 1834)** 20mm, Holguin, Oriente Prov. **8a,b.** ***P. muscarum splendida*** **Torre, 1950,** 24mm, Holguin, Oriente Prov. **9a,b.** ***P. muscarum subrocheri*** **(Pilsbry, 1889)** 19mm, Holguin, Oriente Prov. **10a,b.** ***P. muscarum tanamensis*** **Torre, 1950,** 24mm, Holguin, Oriente Prov. **11a,b.** ***P. picta fuscolimbata*** **var.** ***pseudo-muscata*** **Torre, 1950,** 25mm, Baracoa, Oriente Prov. **12a,b.** ***P. picta fuscolimbata*** **var.** ***pseudo-nigrolimbata*** **Torre, 1950,** 30mm, Baracoa, Oriente Prov. **13a,b,c,d,e,f,g.** ***P. picta fuscolimbata*** **Torre, 1950,** 29-31mm, Baracoa, Oriente Prov. **14a,b,c.** ***P. picta iolimbata*** **Torre, 1950,** 30mm, Quemada, Oriente Prov. **15 a,b,c,d.** ***P. picta iolimbata*** **var.** ***iofasciata*** **Torre, 1950,** 28mm, Baracoa, Oriente Prov. **16a,b.** ***P. picta iolimbata*** **var .** ***iosaturata*** **Torre, 1950,** 28mm, Baracoa, Oriente Prov. **17a,b,c,d,e,f.** ***P. picta nigrolimbata*** **Torre, 1950,** 26-28mm, Baracoa, Oriente Prov. **18** ***P. picta nigrolimbata*** **var .** ***nigrofasciata*** **Torre, 1950,** 28mm, Baracoa, Oriente Prov.

Cuban *Polymita picta* (19-24), *Polymita sulphurosa* (25-27), *Polymita venusta* (28-30), & *Polymita versicolor* (31-33)

with the subspecies and forms or varieties named by Dr. Torre. The International Congress of Zoological Nomenclature (ICZN) does not recognize form or variety names. So these names are almost like a common name designation, while many of the subspecies names do not quite fit the generally accepted criteria for subspecies (i.e., geographic isolation from other subspecies in the genus and reproduction only within the subspecies). Because arguments can and have been made on both sides of this issue, I decided to present the genus *Polymita*, in main, as listed and discussed on www.polymitahomepage.com. My primary departure from this online reference is that the author's name will be listed in reference to species or subspecies, and not variety or form. Thus the web site lists ***Polymita venusta* var. *testudinea* Torre, 1950**, but Torre's name is in reference to the variety name *testudinea*, which has no official status, thus the reference author must be **Gmelin, 1791.**

19 a,b,c, d. ***P. picta picta* (Born, 1778)** 30mm, NE coast of Oriente Prov. **20a,b,c.** ***P. picta picta* var. *multifasciata* (Born, 1778),** 28mm, Baracoa, Oriente Prov. **21a,b.** ***P. picta picta* var. *obscurata* (Born, 1778)**, 28mm, Baracoa, Oriente Prov. **22a,b,c,d.** ***P. picta roseolimbata* var. *albolimbata* Torre, 1950,** 27mm, W. Baracoa, Oriente Prov. **23a,b,c,d.** ***P. picta roseolimbata* var. *virgata* Torre, 1950,** 27mm, Playa Alanca, Baracoa, Oriente Prov. **24a,b,c,d,e.** ***P. picta roseolimbata* Torre, 1950,** 27-28mm, Maisi, Baracoa, Oriente Prov. **25a,b.** ***P. sulphurosa flammulata* var. *iridans* Torre, 1950,** 17mm, Yaguanique, Canonova, Oriente Prov. **26a,b.** ***P. sulphurosa flammulata* var. *violacea* Torre, 1950,** 18mm, Yaguanique, Canonova, Oriente Prov. **27a,b.** ***P. sulphurosa flammulata* var. *viridis* Torre, 1950,** 18mm, Yaguanique, Canonova, Oriente Prov. **28a,b.** ***P. venusta* (Gmelin, 1791)** 23mm, Tagabu, Oriente Prov. **29a,b.** ***P. venusta* var. *olivacea* (Gmelin, 1791),** 24mm, Oriente Prov. **30a,b,c.** ***P. venusta* var. *testudinea* (Gmelin, 1791),** 23-28mm, Malavari, Oriente Prov. **31a,b.** ***P. versicolor* (Born, 1780)** 21mm, Rio las Canos, Baracoa, Oriente Prov. **32a,b.** ***P. versicolor* var. *minor* (Born, 1780),** 19mm, Siboney, Oriente Prov. **33a,b.** ***P. versicolor* var. *reticulella* (Born, 1780),** 17mm, Playa Blanca, Oriente Prov.

An SEM sampler of small snails from Sarasota sediment

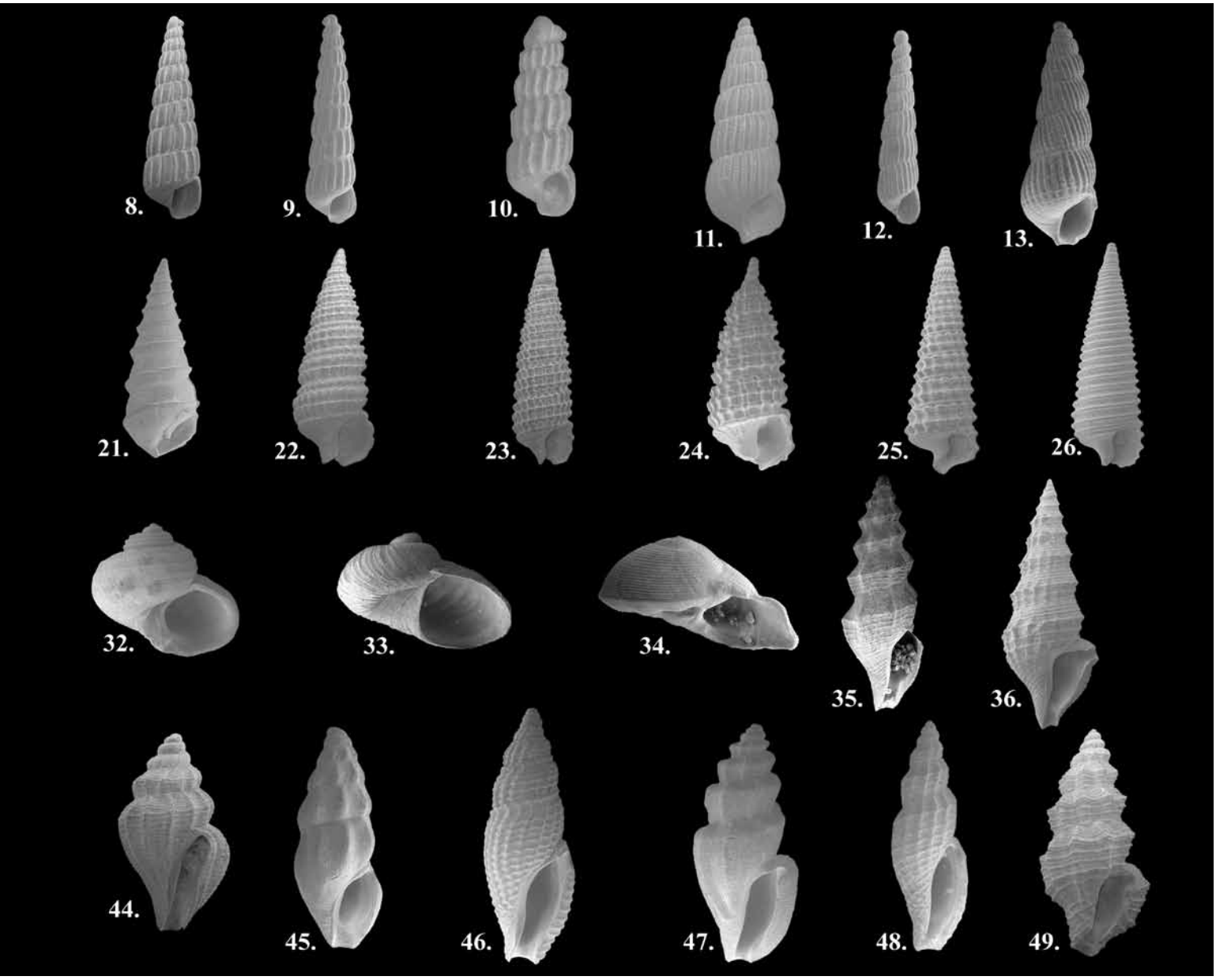


Row A L to R: 1. ***Ebala resticula*** **(Dall, 1889) 1.07 mm 2.** ***Falsoebala*** **unknown species [hereafter simply "sp."] 0.90 mm† 3.** ***Graphis underwoodae*** **Bartsch, 1947, 1.65 mm 4.** ***Henrya*** **sp. A 1.30mm† 5.** ***Henrya*** **sp. B 1.67 mm† 6.** ***Murchisonella tampaensis*** **Bartsch, 1947, 1.57 mm 7.** ***Syrnola*** **sp. 2.61 mm† 8.** ***Turbonilla*** **(*Chemnitzia*) sp. A 3.10 mm† 9.** ***T. (Chemnitzia)*** **sp. B 2.65 mm† 10.** ***T. (Chemnitzia) unilirata*** **Bush, 1899, 1.34 mm 11.** ***T. (Pyrgiscus)*** **sp. A 3.96 mm† 12.** ***T. (Pyrgiscus) protracta*** **Dall, 1892, 2.60 mm† 13.** ***T. (Pyrgiscus)*** **sp. B 3.94 mm†**

Row B L to R: 14. ***Pelycidion*** **sp. cf.** ***P. matthewi*** **L. Campbell, 1993, 1.12 mm† 15.** ***Zebina clarksvillensis*** **(Mansfield, 1930) 3.95 mm† 16.** ***Zebinella planata*** **(Dall, 1892) 5.52 mm† 17.** ***Finella dubia*** **(d'Orbigny, 1840) 1.68 mm 18.** ***Vitreolina bermudezi*** **(Pilsbry and Aguayo, 1933) 2.02 mm 19.** ***Scalenostoma*** **sp. 1.77 mm† 20.** ***Oceanida*** **sp. 2.11 mm† 21. (?)*Scalenostoma*** **sp. 2.63 mm† 22.** ***Cerithiopsis*** **sp. cf.** ***C. parvada*** **Rolán and Fernández-Garcés, 2007, 3.45 mm† 23.** ***C. flava*** **(C.B. Adams, 1850) 3.02 mm 24.** ***C.*** **sp. cf.** ***C. iuxtafuniculata*** **Rolán, Espinosa, and Fernández-Garcés, 2007, 2.84 mm† 25.** ***Retilaskeya*** **sp. cf.** ***R. emersonii*** **(C.B. Adams, 1839) 3.74 mm† 26.** ***Seila*** **sp. cf.** ***S. adamsii*** **(H.C. Lea, 1845) 3.47 mm†**

Row C L to R: 27. ***Metaxia*** **sp. 2.92 mm† 28.** ***Cosmotriphora*** **(?) sp. 3.38 mm† 29.** ***"Skenea"*** **sp. cf.** ***S. smithfieldensis*** **(Olsson, 1916) 0.71 mm† 30.** ***Didianema duplinensis*** **(Dall, 1898) 1.48 mm† 31.** ***Marevalvata*** **sp. 3.48 mm† 32.** ***Gelasinostoma elegantulum*** **(Dall, 1892) 2.69 mm† 33.** ***Macromphalina*** **sp. 1.33mm† 34.** ***Anticlimax calliglypta*** **(Dall, 1903) 2.72 mm† 35.** ***Cryoturris serta*** **Fargo** ***in*** **Olsson and Harbison, 1953, 5.69 mm 36.** ***Nannodiella*** **sp. cf.** ***N. pauca*** **Fargo in Olsson and Harbison, 1953, 5.49 mm†**

by Harry G. Lee



Row D L to R; upper to lower: 37. *Kurtziella atrostyla* (Tryon, 1884) 3.56 mm 38. *Cymakra* sp. 3.18 mm† 39. *Glyptaesopus proctorae* (M. Smith, 1936) 6.19 mm. 40. *Iselica lyra* (Conrad, 1835) 5.58mm† 41. *Iselica globosa* (H.C. Lea, 1843) 2.17 mm 42. *Nassarina glypta* (Bush, 1885) 3.84 mm 43. *Miralda* sp. cf. *M. havanensis* (Pilsbry and Aguayo, 1933) 1.89 mm† 44. *Brachycythara biconica* (C.B. Adams, 1850) 2.75 mm 45. *Lissodrillia* sp. 3.95 mm† 46. *Thelecythara* sp. cf. *T. floridana* Fargo in Olssson and Harbison, 1953, 4.92 mm† 47. *Agathotoma castellata* (E.A. Smith, 1888) 3.74mm 48. *Vitricythara metria* Dall, 1902, 4.37mm 49. *Glyphoturris diminuta* (C.B. Adams, 1850) 4.02 mm.

- **Images not to scale (optimally magnified for depiction of shell characters); maximum dimension in caption.**
- **Dagger (†) connotes species presumed extinct (33 of the 49 species: 67%).**
- **26 of all 49 species (53%), designated "sp.," [76% of the 33 extinct species] are apparently new to science.**

These (mostly) micromollusks were taken from SMR 10 sand and shell mine in NE Sarasota Co., FL (27.38033, -82.37788 NAD27). This is the site of the Sunday, July 14, 2013 COA Convention field trip, which event has proven to be the springboard for an ongoing study which recently entered its third year. Approximately 250 species of micromollusks (under 5.50 mm maximum linear dimension) have been culled from matrix and spoil removed from this site, at which the Lower Pinecrest beds of the Upper Tamiami Formation have been exposed. Chronostratigraphically this material was deposited during the Upper Pliocene Epoch and is ca. 3,000,000 years old.

Population genetics of *Felimare californiensis*

Craig Hoover

Felimare californiensis (Bergh, 1879), is a sea slug that ranges from Baja, including both the Gulf of California and the Mexican Pacific, to Southern California. This nudibranch experienced a regional extinction in the northern part of its range during the 1970s that lasted twenty years. It has since returned to Southern California, and has been consistently found at Catalina Island during the past decade. Within the past three years, *F. californiensis* has also been sighted elsewhere along California's coast.

***Felimare californiensis* (image by author) grazing on sponges off the California coast. This brightly colored nudibranch is typically less than 80mm as an adult and probably lives for only one year. It began disappearing from California waters in the 1970s and was gone by 1984. It was not seen in the area for the next 20 years, until a diver spotted one off Catalina Island in 2003.**

The population was tested for genetic structure, including samples from throughout its range. Laboratory methods included polymerase chain reaction (PCR) for amplification of the 16S and CO1 mitochondrial genes, and Sanger sequencing. Analytical methods included a haplotype network, fixation index analysis (F_{ST}), and analysis of molecular variance (AMOVA). Preliminary results indicate a need for taxonomic revision and also suggest minimal genetic structure in the population. Microsatellites will be developed late in 2015 to improve the resolution of spatial-genetic relationships within the population.

The expected outcome of this research is a description of the spatial scale of gene flow within the population of *F. californiensis*. Recolonization of this animal in Southern California presents a unique opportunity to examine dispersal within a recent temporal context. This study of population genetics is of relevance to the conservation and potential recovery of other mollusks in Southern California that have commercial and cultural significance, such as the abalone. This research was supported by a COA grant.

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According to a 2013 article* in the journal *Marine Biology* by Jeff Goddard et al. (a project scientist at the Marine Science Institute at UC Santa Barbara), although the exact cause of the disappearance of *Felimare californiensis* from Southern California is unknown, among the key factors may have been degraded water quality in the area known as the California Bight. The Clean Water Act of 1972 started a concerted effort to reduce pollutants and protect the area from uncontrolled runoff and sewage overflows. This resulted in greatly improved environmental conditions in the area and maybe the reintroduction of this bright blue sea slug. http://www.news.ucsb.edu/2013/013484/university-californias-unofficial-favorite-sea-slug-poised-make-comeback

*Goddard, Jeffrey H.R., Maria C. Schaefer, Craig Hoover, & Ángel Valdés. 2013. "Regional extinction of a conspicuous dorid nudibranch (Mollusca:Gastropoda) in California, *Marine Biology,* 160(6): 1497-1510.

New species of Vietnam landsnails

Nguyen Ngoc Thach & Franz Huber

Landsnails are present in Vietnam with various sizes (from tiny *Hypselostoma crossei* at only 3mm to giant *Bertia pergrandis* wider than 75mm), assorted shapes (from discoidal *Möllendorffia blaisei* to trochoidal *Ganesella acris*), and attractive colors (such as *Amphidromus huberi*). Many Vietnam landsnails have been described, but most of them were collected in North Vietnam; the snails in South Vietnam have been poorly studied to date. In this article, four newly described species of landsnails from South Vietnam are presented with three species in the genus *Amphidromus* (family Camaenidae) and one species in the genus *Pterocyclos* (family Cyclophoridae).

- ***Amphidromus naggsi*** Thach & Huber, 2014 (Fig.1-4)

This is one of the largest species of *Amphidromus* with lengths reaching 69.6mm (Fig.1). The shell is elongate and very large with a swollen body whorl and a tall spire. Mean adult size is 55-65mm long. The sculpture consists of deep broad spiral channels on the body whorl and fine oblique closely-spaced axial ribs (strongest on the early whorls and base). The aperture is wide with a thick calloused outer lip. The parietal wall and columella are also calloused. The color usually white. Yellow specimens are seldom seen and much sought after by collectors. The type locality is the Đơn Dương district, Lâm Đồng province. This species is similar to *Amphidromus ingens* Möllendorff, 1900, in its shape and large size, but differs with its wrinkled (not smooth) outer surface, the presence of two or three (not one) broad spiral channels on the body whorl, a more prominent sculpture on the penultimate whorl, and a more elongate aperture. This species was named after Dr. Fred Naggs of the London Museum of Natural History, London, and is a favorite of collectors due to its rarity and large size.

- ***Amphidromus huberi*** Thach, 2014 (Fig.5-8)

This is the most beautiful *Amphidromus* of Vietnam, with elongate-tapering shape and a tall spire. Mean adult size is 33-38mm long. The outer surface is smooth and ornamented with many colors (blue, yellow, red, white) and widely-spaced axial stripes between spiral bands. The aperture is sinistral and wide with a thin outer lip and the external pattern visible within. Type locality is the Đơn Dương district, Lâm Đồng province. A key diagnostic character is the presence of bisected axial stripes on the spire whorls (Fig.8). This species was named after Mr. F. Huber of Austria, and it is much sought after by collectors due to its rarity and attractive colors.

- ***Amphidromus thachi*** Huber, 2015 (Fig.9-12)

The shell is small and elongate-ovate with a low spire and adpressed sutures. Mean adult size is 28-31mm long. The periphery is rounded and the body whorl swollen and short. The aperture is usually sinistral (63.6%), and the outer lip thin, reflexed, and bordered by a narrow white line. The color is whitish with a black columella, a black outer lip, and chalky white lines beneath sutures. The columella is strongly concave, heavily calloused, and twisted at the anterior end. The type locality is between the outskirts of Nha Trang city and Cam Lâm district, Khánh Hòa province. This new species is readily recognized by the black calloused columella that is twisted at anterior end and the black outer lip that is bordered by a fine white line. This species was named after Dr Thach of Vietnam, and the supply of this landsnail cannot satisfy the demand. To date, only 11 specimens have been collected..

- ***Pterocyclos huberi*** Thach, 2015 (Fig.13-16)

The shell is small and discoidal, with a very low spire and constricted sutures. The mean adult size is 17-20mm wide. The dorsal side is flat, but concave at the central portion, with the outer surface ornamented with brown widely-spaced transverse stripes. The aperture is dextral and circular with the external pattern visible within. The outer lip doubled, with the interior lip simple and continuous while the exterior one is expanded and wavy at the posterior. The umbilicus is widely open and deep with an air tube that is wide, moderately long, and touching the body whorl. The periostracum is thick and the operculum has raised concentric ribs. The color is variable, from whitish to dark brown. The type locality is the Lạc Dương area, Lâm Đồng province. The key diagnostic character is the wavy outer lip at the posterior end. This species was named after Mr. F. Huber of Austria, for his enthusiasm in collecting Vietnam landsnails.

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Thach, N.N. 2015. *Pterocyclos huberi,* a new species from Vietnam (Gastropoda: Caenogastropoda: Cyclophoridae). *Novapex*, Brussels, Belgium, 16(2): 59-62.

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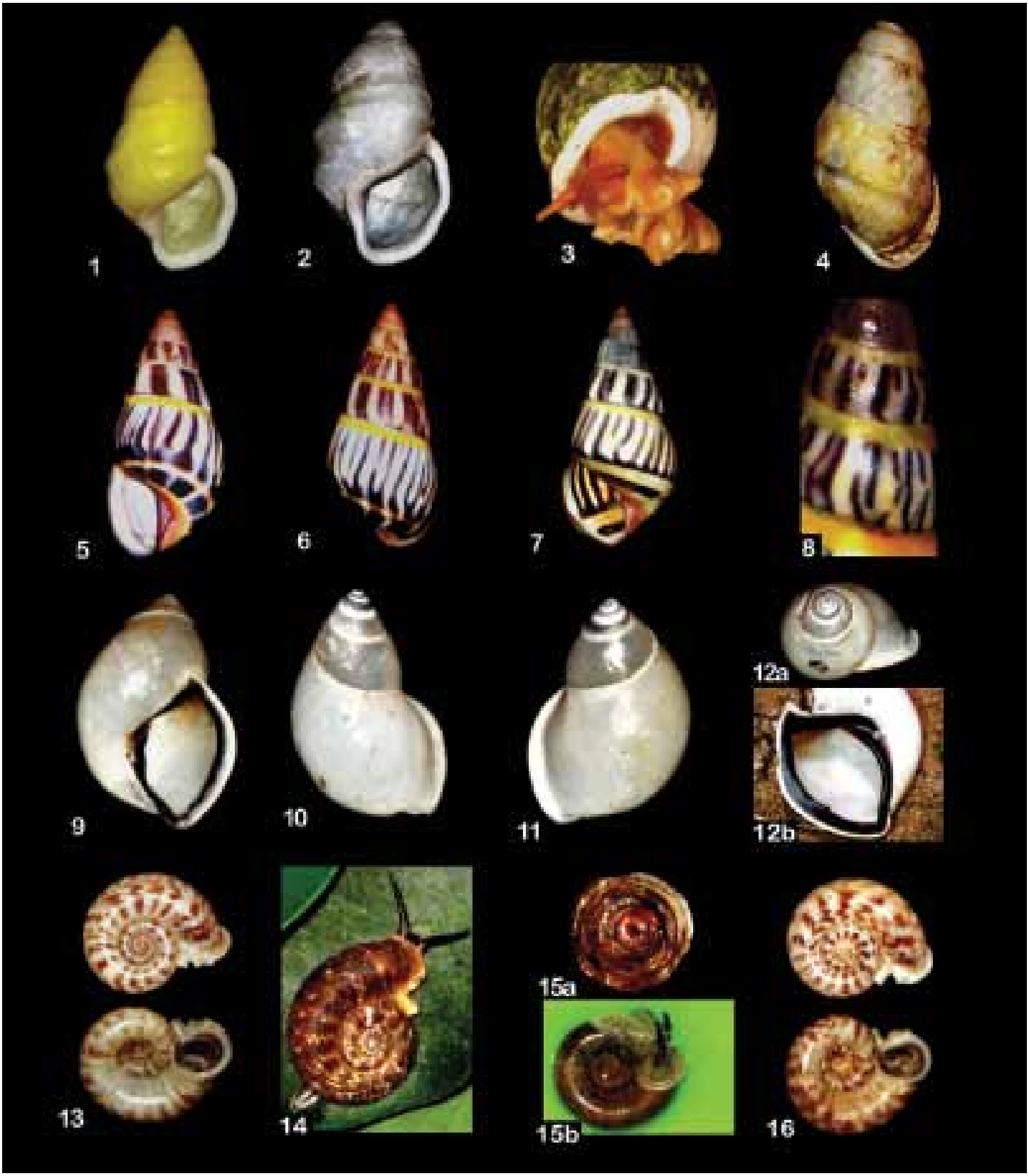


1. - 4. ***Amphidromus naggsi*** **- 1.** 69.6mm, **2.** holotype, 61.4mm, **3.** live animal, **4.** paratype 4, 62.9mm. **5. - 8.** ***Amphidromus huberi*** **- 5. & 6.** holotype 33.9mm, **7.** paratype 1, 33.8mm, **8.** paratype 2, 35.7mm. **9. - 12.** ***Amphidromus thachi*** **- 9. - 11.** paratype 2, 29.6mm, **10.** paratype 1, 33.3mm, **12.** apertural and apical views. **13. - 16.** ***Pterocyclos huberi*** **- 13.** holotype, 17.3mm, **14.** live animal, **15.** operculum (a) and live animal (b), **16.** paratype 1, 17.4mm.

SCUM XIX: Southern California Unified Malacologists

Lindsey T. Groves

Front row: (l to r) Jere Lipps, Carol Stadum, Shawn Wiedrick, Jenny McCarthy, Natalie Yedinak, Jann Vendetti, Sabrina Medrano, Haleah Golestani, Sarah Carey, Kathy Kalohi, Pat LaFollette, Carole Hertz, Terry Rutkas, Maggie Carrino, Scott Rugh, Don Cadien.

2nd row: (l to r) Eric Madrid, Austin Hendy, Clara Jo King, Erika Espinoza, Craig Hoover, Jules Hertz, Emile Fiesler, Hans Bertsch, Keith Thompson, Bob Abela, Britt Latham.

3rd row: (l to r) Doug Eernisse, Chuck Powell, Phil Liff-Grieff, Pat Don Vito.

Top row: (l to r): Ángel Valdés, Eric Breslau, Kelvin Barwick, Tony Phillips, George Kennedy, Lindsey Groves.

Present at SCUM XIX but not in photo: David Berschauer, Ian Christian Scher, Dave Goodward, and Diana Weir.

The 19th annual gathering of **S**outhern **C**alifornia **U**nified **M**alacologists (SCUM) was held at the Laguna Hills Community Center, Laguna Hills, CA, and was attended by forty professional, amateur, and student malacologists and paleontologists on Saturday, 24 January 2015. This informal group continues to meet on an annual basis to facilitate contact and keep attendees informed of research activities and opportunities. As always, in keeping these gatherings informal, there are no dues, officers, or publications. The continuing success of informal groups such as SCUM, Mid-Atlantic Malacologists (MAM), Ohio Valley Unified Malacologists (OVUM), and FUM (Florida Unified Malacologists), will hopefully encourage more regional groups of malacologists and paleontologists to meet in a likewise manner.

SCUM XIX host Carol Stadum greeted pre-meeting attendees with a variety of pastries, fresh fruit, coffee, tea, and juices. Around 9:00 AM Carol welcomed the group and made several announcements. She then introduced Lindsey Groves to make some major announcements with respect to the Malacology and Invertebrate Paleontology Sections of MHMLAC. He introduced new curator Dr. Jann Vendetti who was hired as Twila Bratcher Endowed Chair in Malacological Research for two years and Dr. Austin Hendy, the new Collection Manager of Invertebrate Paleontology. It was also announced that SCUM member Richard Squires retired from teaching duties at California State University, Northridge, after 40 years and was awarded the prestigious 2014 Gilbert N. Harris Award from Paleontological Research Institution for excellence in paleontological research.

In continuing SCUM tradition, all present were given the opportunity to introduce themselves and give a short update about current mollusk related activities. Most presentations were informal but ten attendees gave more detailed talks. Nine students, all mentored by Ángel Valdés, from California State Polytechnic University, Pomona, attended SCUM XIX and four reported on their research. Students Haleah Golestani (*Aplysia*), Sabrina Medrano (Saccoglossans), Jenny McCarthy (Juliidae), Sarah Carey (*Navanax*), and Craig Hoover (*Doriopsilla*) presented informative talks. Other talks of particular interest included a presentation by biological consultant Emile Fiesler (BioVeda) who summarized the biogeography of the introduced freshwater gastropod *Melanoides tuberculata* (Müller, 1774) from its introduction into southern California in 1972 in Riverside County and since collected in Laguna Niguel, Orange County, Palos Verdes Peninsula, and Lincoln Park, both Los Angeles County. This species, which outcompetes native species for food and space, is native to North Africa and Southeast Asia. Shawn Wiedrick summarized his molluscan endeavors since SCUM XVIII, including his current research on the gastropod muricid genus *Ocinebrina* in California and micro-turrid genera and species of the tropical Indo-Pacific. New NHMLAC Invertebrate Paleontology collection manager Austin Hendy presented a short talk on the recent changes in the section since Mary Stecheson's retirement and his plans for the future of LACMIP. Jere Lipps (Cooper Center director) made an impressive presentation about the progress made to improve the John D. Cooper Archaeological and Paleontological Center as the premier repository for specimens and artifacts in Orange County. Once again Doug Eernisse (CSUF) reported on the myriad of projects he has in progress singly and with co-authors both professional and students.

SCUM XX will be hosted by Maggie Carinno at the Laguna Hills Community Center, Laguna Hills, CA, once again, in January of 2016.

SCUM XIX participants and their respective interests and/or activities:

Bob Abela (San Diego Shell Club): Attended with Carole and Jules Hertz.

Kelvin Barwick (Orange Co. Sanitation Dist.): Conducts outfall monitoring projects from offshore Orange County, CA, particular interests in mollusks and polychaetes.

Dave Berschauer (San Diego Shell Club): Shell collector and current editor of the San Diego Shell Club publication, *The Festivus*.

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

Eric Breslau (Cal. Poly. Pomona): Undergrad researching the genus *Melanochlamys*.

Don Cadien (LA Co. Sanitation Dist.): Continues with outfall monitoring projects off southern California with a special interest in crustaceans and solenogasters.

Sarah Cary (Cal. Poly., Pomona): Grad student researching genetic similarities is species of *Navanax* via mitochondrial and molecular gene sequencing.

Ian Christian Scher: No report, attended with Sarah Cary.

Maggie Carrino (City of Laguna Hills): Current city of Laguna Hills paleontologist and host of SCUMM XX in January of 2016.

Pat Don Vito (San Diego Nat. Hist. Mus.): Volunteer at the museum in the Invertebrate Paleontology section.

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

Erika Espinoza (Cal. Poly., Pomona): Grad student working on estimates of species diversity.

Emile Fiesler (Bio Veyda): Conducts biological surveys with an emphasis on mollusks and arthropods. Presentation on the introduced freshwater gastropod species *Melanoides tuberculata* in southern California.

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

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

Lindsey Groves (Nat. Hist. Mus., L.A. Co.): Collection manager at NHMLAC. Research interest in fossil and Recent cypraeoideans and their biogeography and biostratigraphy. Currently working with Daniel Muhs (USGS Denver) on Pleistocene marine terrace chronology and sea-level changes on the California Channel Islands.

Austin Hendy (Nat. Hist. Mus., LA Co.): New Collection Manager of Invertebrate Paleontology at NHMLAC with an interest in fossil mollusks from Panama and northern South America and their taxonomy and biogeography.

Carole Hertz (San Diego Nat. Hist. Mus.): Volunteer at the museum in the Invertebrate Section. Long-time editor of the San Diego Shell Club publication *The Festivus* … now retired.

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

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

Kathy Kalohi (Pac. Conch. Club): Continues as Pacific Conchological Club treasurer, shell and fossil collector, and diver.

George Kennedy (Brain F. Smith & Associates): Conducts environmental monitoring in San Diego County, particularly Pleistocene and Eocene aged strata. Announced the passing of Charter SCUM member Terry Arnold and that his library would be distributed to several institutions in California and Mexico.

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

Pat LaFollette (Nat. Hist. Mus., L.A. Co.): Continues with rearrangement of the Pyramidellidae in the NHMLAC malacology collection and accumulation of on-line literature concerning the pyrams. Also continues work with micromollusks from the Miocene/Pliocene Imperial Formation in the Whitewater Canyon area of Riverside County.

Brit Latham (Cal. St., San Bernardino): Interest in Recent and fossil gastropods.

Phil Liff-Grieff (Pac. Conch. Club): Collector of landsnails with an interest in island biogeography. Has a recent interest in African terrestrial species following a trip to Zanzibar and Rwanda.

Jere Lipps (Cooper Center): Director of the Cooper Center. Presented many of the projects and objectives of the center with regard to Orange County fossils and anthropological artifacts.

Eric Madrid (Cal. Poly., Pomona): Attended with Edgar Breslau.

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

Sabrina Medrano (Cal. Poly., Pomona): Graduate student, researching shelled saccoglossans Oxynoidae and non-shelled saccoglossans Pleurobranchidae.

Tony Phillips (City of LA): Retired from the City of Los Angeles Sanitation District.

Chuck Powell, II (U.S. Geological Survey): Geologist with the USGS with an interest in invertebrate paleontology (especially Neogene mollusks) from Alaska to the Gulf of California.

Scott Rugh (Temecula, CA): Currently preparing a manuscript on the paleontology of the late Pliocene San Diego Formation.

Terry Rutkas (Pacific Conch. Club): Has general interest in all groups of shells. Researches uses of mollusks in human culture, particularly in Polynesia.

Carol Stadum (Carlsbad, CA): Continues to prepare manuscript on "Fossil Reef" outcrops in the Laguna Hills area.

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

Ángel Valdés (Cal. Poly., Pomona): Teaches Evolutionary Biology and continues phylogenetic research on opisthobranch gastropods of the Caribbean and Panamic provinces. Current American Malacological Society president preparing for next meeting in Ensenada, Baja California, Mexico.

Jann Vendetti (Nat. Hist. Mus., LA Co.): Twila Bratcher Chair in Malacological Research at NHMLAC. Researching saccoglossans and Recent and fossil buccinid gastropods.

Diana Weir (Mission Viejo, CA): Former paleo monitor in Orange County and long-time friend of SCUM XIX host Carol Stadum.

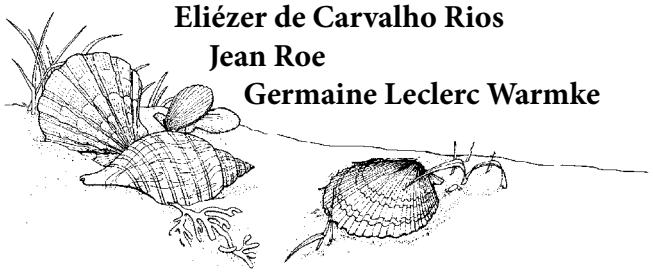
Shawn Wiedrick (Nat. Hist. Mus., LA Co.): Current President of the PCC and interested in all areas of shell collecting. Published two papers in the new *Festivus* on Indo-Pacific micro turrids. Shawn is also considering returning to school and attending California State University, Fullerton, to study ocinebrine gastropods for a Master's degree.

Natalie Yedinak (Cal. Poly., Pomona): New undergrad currently assisting other grad students.

Lindsey T. Groves
Natural History Museum of Los Angeles County
Malacology Section
900 Exposition Blvd
Los Angeles, CA 90007
lgroves@nhm.org

In memoriam:

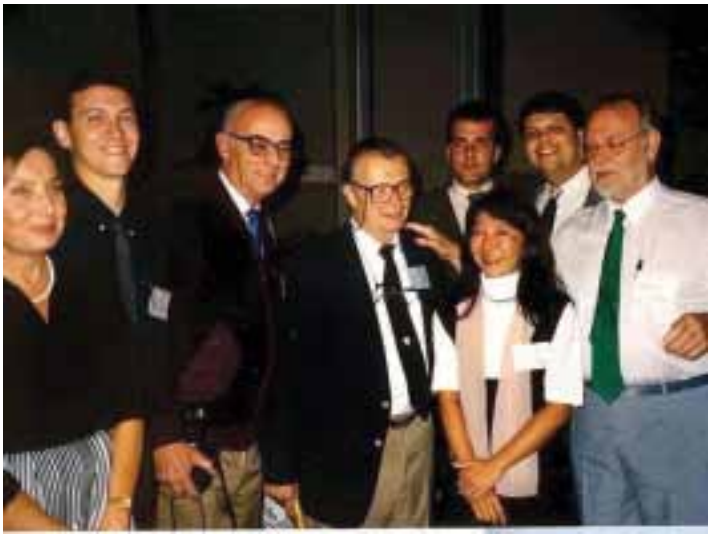
Salle Snyder Crittenden
Eliézer de Carvalho Rios
Jean Roe
Germaine Leclerc Warmke



Salle Snyder Crittenden (right), with son David Synder (middle) and Tom Rice (left) at the 40th anniversary celebration of the Of Sea and Shore Museum in Port Gamble, Washington. Salle was 82 and a resident of Alemeda, California. She was a long time Californian, growing up in Piedmont and San Leando, and graduating from the University of the Pacific (then the College of the Pacific) with a degree in fine arts. She was married to John Crittenden who founded the *Alemeda Journal* in 1987. Salle worked at the California Academy of Sciences (helping manage the museum store) and at the Harbor Bay Club on Bay Farm Island. She enjoyed needlepoint, art museums, and shells. Photograph courtesy of Tom Rice.

Jean Roe passed away on May 2, 2015. She was active in COA for many years and served as recording secretary for a few years. She and her husband Charlie helped to host the 1994 convention in Corpus Christi, TX. They were both active in their local shell club, the Coastal Bend Shell Club, until recent years when age and health slowed them down. Through the years they traveled the world collecting shells. Every year they spent most of May and June on Sanibel and Captiva. In March they celebrated their 60th wedding anniversary. She will be missed. Charlie thanks the many collectors for their outpourings of sympathy.

Lucy Clampit



Eliézer de Carvalho Rios (third from the left). From left to right are: Mrs Maria Helena Tierney, Marcus Coltro, Prof. Rios, R. Tucker Abbott, Ricardo and Gracy Guerrini, Jose Coltro, and Peter Dance. Prof. Rios passed away on March 23, 2015, leaving four adult children. He represented to Brazilian collectors what Tucker Abbott was to Americans, inspiring us with his books and continuous participation in conventions and shell meetings.

He was born on November 9, 1921, in Rio Grande city, Rio Grande do Sul State, Brazil, and graduated with a degree in Chemistry from the Universidade Federal do Rio Grande do Sul (UFRGS) in 1944. He taught classes at the university for 25 years.

In 1953 he founded the Oceanographic Museum in Rio Grande, where he was director for more than 50 years and where he gathered one of the most important collections in South America. He wrote 5 books, in 1970, 1975, 1985, 1994, and the last one in 2009, for which he asked help from friends to revise and prepare it due to his advanced age - but at the end he wanted to finalize it himself since he thought it was taking too long.

My very first shell book was his 1970 edition of Coastal Brazilian Seashells. I've used it so much that all the pages are falling out. Back then I could never imagine that one day I would be honored by participating with information and material for his books.

I meet him in 1983 at a convention of Sociedade Brasileira de Malacologia (SBMa) and after that we met several times in São Paulo and at COA conventions, the times Jose and I most enjoy since we get to spend a whole week together. He was very nice to everyone, always in a good mood, and making us all feel like his children. His sense of humor was fantastic. I remember when he had a pacemaker implanted. He was proudly showing it to everybody at the convention!

But he could be very serious and persuasive on important matters related to his museum. He managed to

get funds from important companies in Brazil to improve the museum's collection, to pay for equipment, and for his trips to conventions where he acquired shells and books. He always appreciated the efforts made by amateurs to supply science with specimens and information. He was aware of our important part in all this and was one of the few professionals that thought like that in earlier days when collectors were not taken seriously by most scientists in Brazil. Luckily it has changed, thanks in part to his efforts.

Several important biologists and collectors followed his love for shells: José Henrique Leal, Luiz Ricardo de Simone, Iara Swoboda, Lauro Barcellos, Paula Spotorno de Oliveira, Paulo Marcio Costa, Carlo Magenta da Cunha, Paulino Soares, Ricardo Absalão, Alexandre Pimenta, Franklin Santos, José Carlos Tarasconi, Renata Gomes, Fabrizio Scarabino, Guido Pastorino, Jesús S. Troncoso, and many others. Of course Jose and I are proud to be on this extensive list.

He worked almost until the end, at least a bit every week. His staff and friends always gave him the care and love that he deserved.

Marcus Coltro

Germaine Leclerc Warmke passed away on the 7th of August 2014, she was 94. Germaine lived in Gainesville and St. Augustine, Florida. She received her BA in biology from the University of Maine and her MA in genetics from the University of Rochester. Before moving to Florida, she and her husband, Harry, lived in Puerto Rico for 19 years where she taught genetics and wrote *Caribbean Seashells*. After her husband's death she moved from Gainsville to St. Augustine where she wrote *Exploring the Seashore* and *No Brief Candle* (her memoir).

The colors of fossil cones

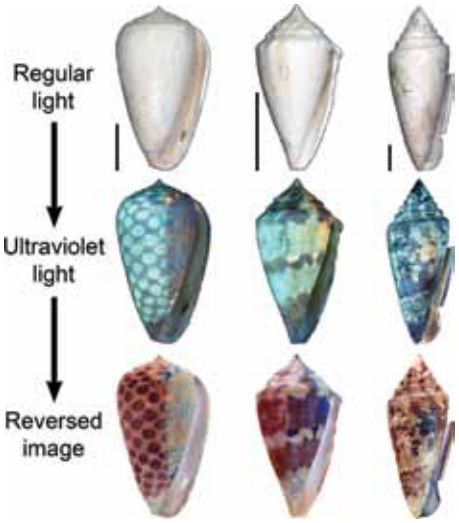


Illustration from the article, on line at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0120924

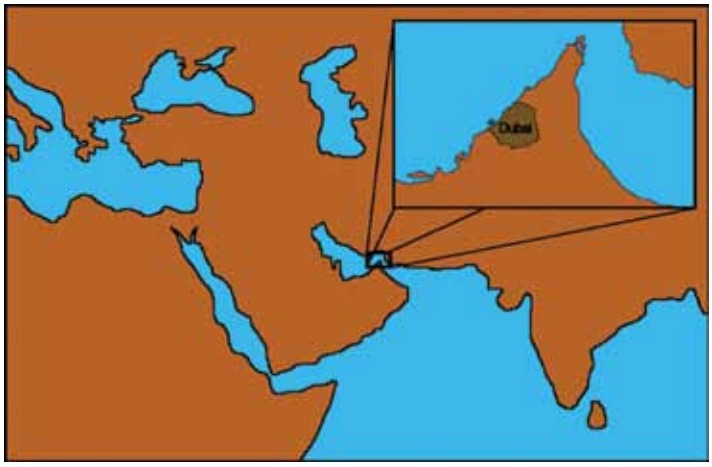
In a recent study, Jonathan R. Hendricks examined 28 species of fossil cone snails from Neogene deposits in the Dominican Republic. For those who think the taxonomy of Recent Conidae is confusing, consider that "...over 1,000 [cone] species have been described from the fossil record." Hendricks further states that many of these are likely synonymous and that the problem arises due to the fossil cone shell's conservative morphology. Without the color and pattern found on Recent cone shells, researchers of fossil cone shells are left with white shells all shaped alike. Hendricks notes that in the 1960s, Axel Olsson discovered that patterns, if not coloration, could sometimes become visible on fossil shells illuminated with ultraviolet (UV) light. Hendricks took this a step further and digitally manipulated the UV image (reversing the colors) to show a closer approximation of the shell's living color pattern (see image above). In so doing he was able to discover 13 new fossil cone species.

That UV light can reveal the color pattern on some fossil shells is fairly widely known. What is not known is exactly how this occurs. What are the specific mechanics that cause certain pigments or chemicals to fluoresce? We don't really know. In fact, there is still much unknown about the chemistry of shell pigment. For fossil shells, though, it has now been shown that some process, like oxidation, either through exposure to the sun or soaking in a bleach solution, enhances the UV fluorescent response.

Hendricks, J.R. 2015. "Glowing Seashells: Diversity of Fossilized Coloration Patterns on Coral Reef-Associated Cone Snail (Gastropoda: Conidae) Shells from the Neogene of the Dominican Republic." PLoS ONE 10(4): e0120924. doi:10.1371/journal.pone.0120924

Dubai mollusks and pearls

Kristina Joyce



Mention Dubai on the Arabian Gulf (known as the Persian Gulf by non-Arabs) and most people envision wealth and an ultra-modern United Arab Emirates city. Dubai, however, was an ancient port of trade in the area known as the Creek where the sea cuts into the land. Classic seaworthy vessels sailed with goods that eventually ended up in faraway places such as India and eventually China.

Dubai is the capital of the Dubai state, called an Emirate, of which there are seven in the United Arab Emirates (an independent nation at the tip of the Saudi Arabian peninsula). Dubai city was an important refuge from the desert heat for roaming Bedouin tribes. Some sailed to Dubai oyster beds that gave up such beautiful and plentiful pearls that even Queen Elizabeth I wore ropes of them in many of her formal portraits. When men free-dove for the *Pinctada margaritifera* (Linnaeus, 1758) oysters, they protected themselves with nose clips, white cotton suits on their bodies against jellyfish, and leather on their hands for scraping up the shells. A basket hung on a cord around the diver's neck for the oysters and a rope with a rock tied to it was for descending and for being pulled back to the surface. Oysters were opened on the desk in the presence of all and any pearls found went to the good of the entire crew. A poor haul meant that the divers would be in debt against the voyage advance. Even one great pearl would benefit all regardless of who captured the oyster. (See the photographs from the Dubai Museum and the Sheikh Rashid House Museum.) This profitable venture continued in Dubai until 1930 when it ceased because of the Japanese culturing of pearls. Many of the sailing vessels survived for local use and the tourist trade.

The covered open-air fish market in the Dubai Creek area is very large and vendors offer a vast array of sea produce, including many mollusks. Because Muslims pray five times each day (a practice called "salat"), fresh catch is sold early and in the later afternoon. The market is not air-conditioned, but it is an excellent place to buy mollusks, especially edible bivalves and gastropods. To window shop an incredible range of pearls, one may walk or ride an abra (ancient type of taxi boat) for 1 dirham (about a third of a dollar) to the nearby Gold Souk. Local antique dealers do not seem to carry the original Dubai pearls and neither do the

The author holding a fresh tuna in the open-air fish market in Dubai Creek.

Some of the market fish and mollusks.

A view of "The Creek," Dubai.

***Acteon eloiseae* Abbott, 1973, 29mm, from neighboring Oman is named after Eloise Bosch.**

The aquarium located inside the Atlantis Hotel.

***Pinctada margaritifera* (L., 1758), 125mm, an Indo-Pacific invasive species and a source of pearls.**

Palm Island as seen from the International Space Station. Photo by Cmdr. Leroy Chiao. Wikipedia.com

Another view of Palm Island. Construction involved the use of more than 325 million tons of sand.

modern jewelers, but it is possible to bargain for a beautiful pearl set in gold by offering half of the asking price. This is a skill practiced aggressively by the locals and involves some of the best priced jewelry in the world.

Swimming, lounging under an umbrella, and shelling at the beach of the Jumeirah Beach Hotel are all pleasant early or late on a summer day, despite the dangerous sun. December weather is entirely tropical. In June small mollusks did wash up on the powdery white sand from the aquamarine water. On the beach there was even a fragment of a pelagic cephalopod cuttlefish's inner shell. Nearby is the famous Hotel Burj Al Arab, which is modeled on one of the ancient "dhow" sailing vessels. The Atlantis Hotel some distance away is at the base of the Palm Islands. These islands are all manmade from dredged sand deposited with the help of geo-positioning devices.

Journeying west by car on the excellent highways to the neighboring Emirate of Fujairah, a person may see small mollusks on that other shore. Oil is shipped from this coast. The country of Oman is adjacent, where Donald and Eloise Bosch researched Mollusca for their book, *Seashells of Southern Arabia*. *Acteon eloiseae* Abbott, 1973, is a gorgeous little shell named for Mrs. Bosch.

Although summer is the most cost effective time to travel to the United Arab Emirates, the heat and humidity are intense. There is a direct 13 hr. flight on Emirates Airlines from Boston to Dubai and prices are generally 50-75% lower in June-August for flights and all accommodations. There are many wonderful aquariums and museums throughout Dubai's comfortably air-conditioned hotels and malls. Look for more details in *Rough Guide* and *Eyewitness Travel* books. Dubai is indeed a wonderful place to visit for an unusual molluscan adventure and all tourists are welcome.

Kristina Joyce
kris1shell@aol.com

THE 35TH ANNUAL MARCO ISLAND SHELL SHOW

The 35th annual Marco Island Shell Show was held March 12-14, 2015, in the Disseler Hall at the United Church of Marco Island. The members of the Marco Island Shell Club would like to thank everyone who supported our 35th annual Shell Show by: attending the show, making a donation, entering a scientific or artistic exhibit, making a purchase in the gift shop, buying raffle tickets, participating in the "Hunt for an Anomaly" contest, or sponsoring an award or trophy.

Judges for the 2015 show were: SCIENTIFIC DIVISION: Dr. José H. Leal, a Science Director and Curator from Sanibel, FL. and Dr. Gary Schmelz, a Marine Biologist and Paleontologist from Naples, FL.; ARTISTIC DIVISION: Phyllis Gray, an experienced Shell Show exhibitor and judge from Orlando, FL. and Bill Jordan, a first time judge from Sanibel, FL.

The COA Award went to Bob and Alice Pace for a 10 foot exhibit of "Uncommon to Rare Florida and Caribbean Marine Muricids" The People's Choice Awards went to Georgia Lohmeyer in the artistic division and Marge Tunnell in the scientific division.

Winners in the scientific category:

Conchologist of America (COA) - Uncommon to Rare Florida and Caribbean Marine Muricids - Robert and Alice Pace.

Du Pont - Family Turbinidae Rafinesque - Gene Everson.

Board of Directors - Best World-Wide Single Shell - Columbariidae - Gene Everson.

Dr. William Reid Plaque - Helmets and Bonnets of the World - Bob and Pat Linn.

Best Novice Scientific Trophy - Shells of Panama - Marge Seeger.

Best Miniature Shell Trophy - *Typhis* (*Siphonocheles*) *tityrus* (Bayer, 1971)- Robert and Alice Pace.

Outstanding Self-Collected Marco Island Shells - *Oliva sayana* Ravenel, 1834 - Golden Olives - Becky Miller.

Florida Gulf Coast University - Most Outstanding Self-Collected Marco Island Shell - World Record Size - Muricidae: *Eupleura sulcidentata* Dall, 1890 (27.7 mm) - Cathy McNeilly.

Florida Gulf Coast University Natural History Photographic Award - Olive Tracks - Pat Wood.

Friends of Rookery Bay: Best Self-Collected Single Shell - *Chircoreos florifer* (Reeve, 1846) - Robert and Alice Pace.

Judges Special Merit - Range of *Scaphella contoyensis* Emerson & W.E. Old Jr., 1979 - Phil Miller.

Judges Special Merit - Genus *Provocator* World-Wide - Greg Curry.

Winners in the artistic category:

Best Artistic Exhibit in the Student Class - Novelties - Riley Morris.

Best Artistic Exhibit in the Junior Class - Single Sailor Valentine - Julia Wilson.

2015 Shell Art Workshop Tables: Top Artistic Novice Trophy - Linda Kropp.

Iberia Bank: Best Exhibit in the Hobbyist Class - Bobbie Muzichuk.

The Mary J. Ciaramello Trophy - Best Single Flower or Single Stem of Blossoms - Nancy Maney-Meer.

The Best Non-Floral Trophy - Ellen Dutcher.

CJs on the Bay: Professional Floral Trophy - Judy Daye.

The Shell Show Committee - Best Exhibit Non-Floral - Charles Barr.

Best Professional Single Sailor's Valentine - Constance Marshall Miller.

The Mary C. and John B. Maerker Plaque: Best exhibit in Novice /Hobbyist Categories to an Active Member - Bobbie Muzichuk.

Judges Merit - Georgia Lohmeyer, Charles Barr, and Nancy Maney-Meer.

Alice and Bob Pace with their COA Award for "Uncommon to Rare Florida and Caribbean Marine Muricids." Their display included uncommon to rare species, some of world record size, and some paratypes.

What do we learn from collections? The Shell Museum perspective

Text and photos by José H. Leal, Ph.D., Science Director and Curator, The Bailey-Matthews National Shell Museum

The publisher of this beautiful magazine, Conchologists of America (COA), is undoubtedly the largest assemblage of shell enthusiasts in the world, with its membership comprised mostly of collectors. Chances are, if you received this magazine in the mail, you like and collect shells. We humans have the desire to collect. Our inquisitive nature compels us to accumulate natural objects. The resulting assemblages are informative and have the potential to enhance knowledge about the group of things collected, no matter their kind: meteorites, mushrooms, bird eggs, insects, bones, or shells, to name just a few. From a conceptual standpoint, the large institutional collections (museums, universities, etc.) often mentioned in the pages of this magazine are intrinsically extensions of your private, enthusiast's collection.

Much of what we know about the natural world we owe to museum collections. Natural history collections are "libraries" of the natural world and, as such, are vital to our understanding of nature and our planet. Historically, natural history collections became firmly established as an outcome of the cycle of European exploration voyages that peaked between the 16th and 18th centuries. The so-called "curiosity cabinets" of natural objects, animals, and plants accrued by European voyagers and nobility as a result of world exploration (and annexation) morphed into the official collections of "royal," and later, "national" natural history museums.

Current scientific research on animals and plants relies heavily on natural history collections. Collections provide baseline data for animal and plant inventories and geographical surveys; the resulting knowledge of distributions (or *geographic ranges*) of different species is instrumental in the study of local extinctions (known as *extirpations*) caused by environmental changes. For example, more local species of plants and animals are likely to be found in the collections of the Bishop Museum (Honolulu) than living in the Hawaiian Islands today. A study of small mammals collected at Yosemite National Park in the early 1900s and deposited at the Museum of Vertebrate Zoology at the University of California, Berkeley, revealed that many of these species now live at higher altitude in that area, a shift most likely induced by global climate change (warmer climate allowing the species to "move upward" the mountain ranges). At The Bailey-Matthews National Shell Museum on Sanibel Island, Florida, the Sanibel-Captiva collection includes a number of species that were abundantly collected a few decades ago but are not so common nowadays.

Every shell in a collection is a potential environmental data recorder. Shells grow by *accretion* (gradual accumulation along an edge) of calcium carbonate: the shell built by the young animal is retained throughout the mollusk's life. Minerals present in the water at different times during shell formation are retained in their original form, and this may provide a record of the environmental conditions (such as salinity and temperature) at the time the shell was made. Bivalve samples from the Shell Museum collection amassed on Sanibel in the 1970s have been used in this type of study.

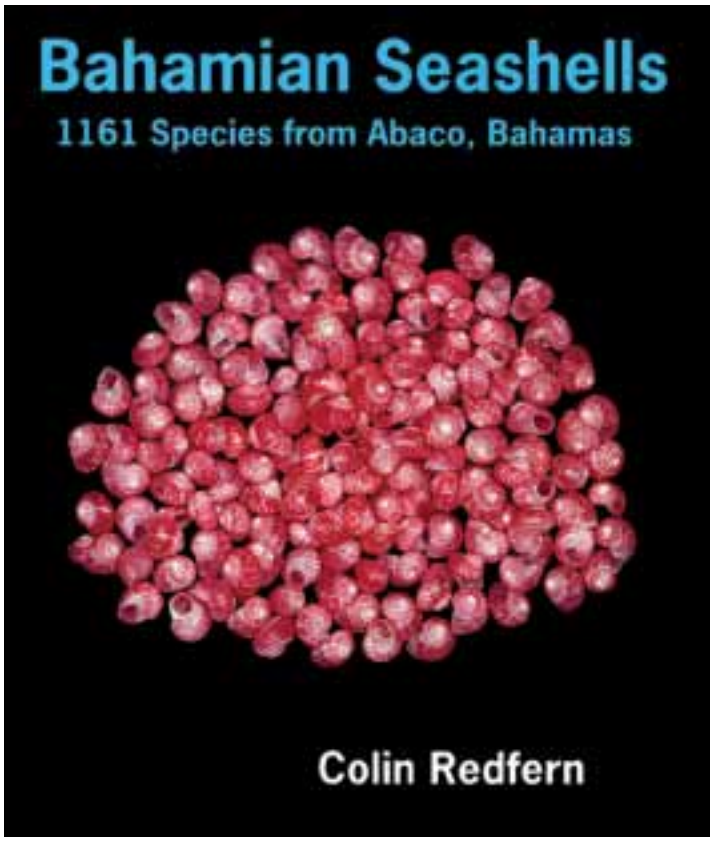
View of the collection work area at the Shell Museum, with volunteer Curatorial Assistants Linda Annesley and Tom Risher (background).

The science of systematics, or the study of the evolutionary relationships of animals, plants, and other living things, would not exist without collections. Scientific collections provide the anatomical and genetic data needed for contemporary phylogenetic studies (the studies of the degrees to which different groups of organisms are related to each other). Research on the evolutionary relationships of animals, plants, and other living things would not exist without collections. Other than sampling from alcohol-preserved animal tissues, modern techniques allow for the extraction of DNA material from dry tissue, including those sometimes found inside old shells. There are many other cases illustrating the value of natural history collections and what can be learned from them, but I hope that at this point I have convinced you of the notion of collections as "snapshots" or "photo albums" of nature and biodiversity.

The collection at the Shell Museum consists of a combination of gifts of private and institutional collections. Private collections may include self-collected shells, shells acquired from dealers or through exchange with other collectors, or any combination of these. The Colin Redfern Collection of Bahamian seashells, donated in 2014 to the Shell Museum, is an excellent example of a collection of self-collected specimens. The Redfern Collection, exceed-

Deep-sea mollusks from the Shell Museum collection.

Four world record-size shells from the Shell Museum collection: From left: *Lobatus goliath* (Schröter, 1805) (380 mm), *Busycon sinistrum* Hollister, 1958 (402 mm); *Charonia variegata* (Lamarck, 1816) (387 mm); and *Triplofusus giganteus* (Kiener, 1840) (606 mm).



The mollusks illustrated and discussed in Colin Redfern's "Bahamian Seashells" are now deposited in the Shell Museum collection.

ing 10,000 lots, includes the material illustrated in his superb "Bahamian Seashells" books. During the its initial years, the Shell Museum received gifts from the National Museum of Natural History (Smithsonian Institution, Washington, DC), and the American Museum of Natural History (New York City). Since the acquisition of those "seed" collections, the Shell Museum has become a magnet for donations of collections of all sizes, currently reaching an estimated total of 120,000 lots. The collection is managed through a state-of-the-art digital catalogue programmed in-house by volunteer Richard Willis, and collection holdings are posted online via the Shell Museum web site.

In 2011, to help expedite our cataloging efforts, the Shell Museum prepared a proposal requesting funds from the Institute of Museum and Library Services (IMLS, a federal funding agency) to hire staff solely to perform data entry. Since beginning of funding in September 2012, an additional 38,000 lots were catalogued, and we expect to have catalogued about 20,000 more at the end of the grant period in late 2015. The "well-oiled machine" that includes processing of collection lots and data entry, consists of a group of volunteer curatorial assistants led by Sanibel's own Tom Risher, working in tandem with part-time collection associates Kim Trebatoski and Heather Williams (whose salaries are funded by the IMLS grant).

In addition to the regular collection, which includes marine, terrestrial, and freshwater mollusks, the Shell Museum also holds a small collection of type specimens (the material examined by the species author(s) and referred to in the original description). The collection is also the source of materials the Shell Museum exhibits.

Next time you wonder about a museum collection, please remember that it is not just a place where thousands of shells are "stored," but a dynamic source of information for many branches of natural sciences and human endeavors, as distinctive from simple shell storage as a busy library is from a book warehouse.

Collection records are stored in digital databases. Search the Shell Museum database online at http://shellmuseum.org/collection.cfm.

[This article is a modified version of a similar piece published in the Shell Museum News, October 2014.]

COA annual convention: July 14 to 18, 2015

Bonaventure Resort & Spa in Weston FL

Convention Trips, Tours & Dinner Cruise July 12-13

The Conchologists Of America annual convention is July 14-18, 2013, in Weston, Florida, with a terrific lineup of field trips on July 12-13. There are still spaces available on the field trips for the COA convention. Please remember, YOU DON'T HAVE TO BE A MEMBER OF COA to register for the convention or take advantage of the field trips; however, you do have to register to go on a field trip. Spouses and significant others are invited to attend the exciting Jungle Queen dinner cruise. Confirmation emails have been sent to registrants. Please check your spam mail and contact us if your confirmation email was not received.

There are a wide variety of interesting programs presented by many distinguished speakers (programs listed below), plus other exciting activities and old friendships to rekindle. The hotel is offering varied lunchtime and dinner options, including a $15 lunch buffet, held at their main dining room, and poolside dining. There are also a number of dining options within a short drive from the hotel. All hotel rooms have a refrigerator except the king size rooms.

Please wear your Everglades/Safari wear to our Welcome Party. Prizes will be awarded for the best, the funniest, and the most original hat. There will be plenty to eat including a couple of adventurous appetizers. And please don't miss the Gala In The Glades Banquet, as well.

There is an excellent selection of over 100 shells and shell-related items in the oral auction. Our six silent auctions will have 300 items each and there will be some great raffle items. The COA Bourse will feature shell dealers from around the world with shells galore!! Bourse dates are Friday, July 17 (1pm-8pm) and Saturday, July 18 (9am-3pm) and is open to the public. **You do not have to be registered at the convention to attend the Bourse and look around or buy!**

For complete convention information and to download a registration form: www.2015COAConvention.com, www.conchologistsofamerica.org, Facebook – 2015 COA Convention.

Please join us for a Gala In The Glades!!

Nancy Galdo (305)-467-4412 and Linda Sunderland
(954) 257-8701, convention co-chairs
PO BOX 19505, Plantation, FL 33318
2015coa@gmail.com

2015 COA Programs:

Robert Carr "Shell tools used by the Paleo Indians of Florida"

Robert Hurst "The sinking of the 1715 Treasure Fleet off the coast of Florida"

John Slapcinsky "How many wolfsnail (*Euglandina rosea*) species are there in Florida and how many were exported in failed biocontrol efforts. Rosy wolfsnail"

Randy Bridges "Cowry selfies: A discussion of photography and cowries"

Dennis Sargent "Worldwide Ranellidae"

Bill Fenzan "The mystery surrounding the disappearing types of cones described during World War II" in the collection of Andre Fenaux"

Phil Fallon "Problems in taxonomy--Examples of frustrations and solutions from personal research"

David Campbell "DNA: Useful but not infallible"

Paul Kanner "California shells and collecting in California waters"

Gary Rosenberg "Finding overlooked and unexpected type specimens in the collections of the Academy of Natural Sciences of Philadelphia"

Ed Petuch "The *Busycon* whelks: Eastern North America's iconic mollusks"

Phillip Gillette "*Aplysia* research at the University of Miami and why it is important to medicine"

Jerry Harasewych "Yo ho ho and a bottle of shells"

Emilio Garcia "Two decades of molluscan discoveries in the Gulf of Mexico on board the R/V "Pelican"

Rich Goldberg "Land Shells of a Lesser Known Ilk"

Gene Coan "Philippi, the least known early malacologist"

Paula Mikkelsen "Understanding Pearls – in Natural History, Human History, and Your Jewel Box."

José Leal "Biomimetics and Mollusks"

Bonaventure Resort poolside at night.

The raffle prizes include two large and really quite spectacular Florida shells.

The *Liguus fasciatus* collection being offered at the 2015 COA oral auction consists of 49 color forms. Many are so-called "topotypes" (T) and were collected in the 1930's and 40's by famous collectors such as Grimshawe, Wright and Jones. The list of forms is:

01. aurantus
02. osmenti T
03. pictus T
04. livingstoni
05. lossmanicus
06. eburneus
07. versicolor T
08. solisoccasus T
09. nancyae
10. wintei
11. fuscoflammellus T
12. walkeri T
13. mosieri T
14. delicatus T
15. vonpaulseni T
16. barbouri T
17. castaneozonatus
18. pseudopictus T
19. capensis T
20. roseatus
21. matecumbensis T
22. marmoratus
23. cingulatus
24. lucidovarius T
25. innominatus T
26. elegans T
27. testudineus
28. dohertyi T
29. graphicus
30. deckerti T
31. vacaensis T
32. ornatus T
33. clenchi
34. nebulosus T
35. elliotensis
36. ligumvitae
37. castaneus
38. lineolatus
39. miamiensis
40. archiejonesi T (very rare)
41. septentrionalis
42. luteus T
43. subcrenatus T
44. dryas
45. floridanus
46. solidulus
47. alternatus T
48. gloriasylvaticus
49. simpsoni

If you have not yet decided whether or not to attend this year's convention, it is still not too late. Go to either of the two web sites mentioned on page 38, print out the forms, and join us.