THE CONE COLLECTOR

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THE CONE COLLECTOR

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On the Cover
***Conus textile* from the Gold Coast, Australia. Image courtesy of Thierry Vulliet**

Note from the Editor

You are now perusing issue # 19 of TCC (actually this is our twenty-first issue, since we began with a trial issues number 0 and along the way we had a special issue 14A) and I thank you for your continued interest in this bulletin. TCC has been a great success – of which I am understandably proud – and that is due to the many authors who have sent their articles for publication and to the many readers whose enthusiasm actually keeps us going.

This is of course our first number in 2012. In the last year we published three numbers, all of them packed with interesting information and beautiful photos. Not only that, we managed to make our website vastly attractive to all collectors and researchers interested in Cones, with addition of the very important work by Mike Filmer, which is still undergoing some updating; hopefully during the current year Paul Kersten's celebrated Checklist will also be uploaded in its entirety (a few examples are already there), and that will mean that by visiting *www.theconecollector.com* everybody will find a fantastic wealth of information about our favourite subject!

At the same time, following the great success of our 1st International Cone Meeting in Stuttgart, in 2010, we have proudly announced the second such event. It will take place at the end of September 2012 in La Rochelle, France. In this issue you will find more information about it, including an impressive list of speakers who have already agreed to participate. The Organizing Committee (Manuel Jimenez Tenorio, Bill Fenzan, Michaël Rabiller, Paul Kersten and myself) is doing every effort to meet the expectations raised by our previous meeting, and we are sure that everybody joining us at La Rochelle will spend a fabulous weekend, have fun and learn a lot. So, be sure to plan your trip! Very soon we will send further information about costs, participation fee, accommodation, etc.

I hope that the present and future issues of TCC will continue to deserve everybody's interest and that they will help to stimulate interest in the study of Cones. And, without further ado, I leave you with the new articles. Enjoy!

A.M.

Who's Who in Cones: Edward J. Petuch

Being the son of a Chief Petty Officer in the US Navy, I was always moving around the country with my family. Although I was born in Maryland, I moved to San Diego, California when I was four and picked up my first shells on the beach at Silver Strand (I think they were *Cerithidea californica*). After looking into the tide pools at La Jolla, and seeing the rich diversity of colorful marine life, I was totally hooked and decided to become a marine biologist. I never swerved from my obsession with marine life and this was really reinforced when my father was stationed in San Juan, Puerto Rico when I was nine. For almost three years, I lived in that tropical paradise and spent every weekend snorkeling on the reefs off San Juan. I amassed a large shell collection and turned my bedroom into a small marine museum. My first cones were collected in Puerto Rico; *Gladioconus mus* and *Stephanoconus regius*.

Those bucolic years of collecting land snails in tropical rain forests and diving on pristine coral reefs came to an abrupt end, when my father retired from the Navy and moved our family to Wisconsin. One day, I was sitting under a coconut palm in San Juan and the next day I was walking through snow flurries in Milwaukee! The shock of leaving the tropics, with their vibrant colors, and winding up in gray, overcast, freezing Wisconsin (in November) was almost too much to bear. In every house that we lived in after that, I had a tropical "retreat" in the basement, where I had glass cases full of shells, echinoderms, and corals and aquaria filled with tropical fish. Fortunately, I soon met Richard Kurz, the renowned mail order shell dealer from Milwaukee, who took me under his wing as an apprentice. This changed my whole life and career.

While in High School, I made three trips to Mexico; two as a summer exchange student in Veracruz State and one on a shell collecting trip with a friend and his father. While in Mexico, I collected along the Veracruz coast and found beautiful live specimens of *Lindaconus spurius atlanticus* and *Gladioconus mus*. My favorite Mexican shell collecting locality, however, was at Acapulco, where I got to see my first Panamic cone species. I was absolutely overwhelmed by seeing live specimens of *Purpuriconus vittatus*, *Ductoconus princeps*, *Chelyconus purpurascens*, *Gladioconus gladiator*, and *Harmoniconus nux*. I was totally hooked on cones! Later, while collecting near Guaymas on the Gulf of California, I also collected beautiful *Dauciconus virgatus*, *Gradiconus regularis*, *Ximeniconus mahogani*, and *Pyruconus patricius*. While working for Richard Kurz, I was able to see thousands of specimens of worldwide cones, particularly the first commercial *Africonus* specimens from the Cape Verde Islands (that's where I received the mislocalized, badly-documented specimens of a little cone that I later named *A. anthonyi*).

All through my college years at the University of Wisconsin-Milwaukee (as a Bachelor's and Master's student in Zoology), Richard Kurz supported my research and collecting trips and allowed me to travel all over the world in search of rare shells. I would trade some of these specimens to Richard and he would sell them to his customers, giving him access to species that had never before been commercially available. This also allowed me the opportunity to collect and conduct research across the world: in Australia (where I lived for two years); in New Guinea and the Solomon Sea Islands (Louisiade Archipelago, Rossel Is-

lands, Calvados Chain, D'Entrecasteaux Islands, etc.); the Fijis; Tahiti and Moorea in the Society Islands; and Japan and the Ryukyu Islands (Amami Islands). For my Master's research, I collected cones in West Africa, including the Canary Islands, Western Sahara, Senegal, Gambia, Sierra Leone, and the Cameroons. For my doctoral research, I also collected cones in the Bahamas, Belize, Costa Rica, Nicaragua, Colombia, Venezuela, Brazil, Uruguay, Grenada, the Grenadines, and Barbados. Because of this intensive collecting and travel, I was able to visit 47 countries and to learn how to ask for shells and shell collecting localities in Spanish, Portuguese, Wolof, and Pigin Motu!

I was accepted to the Rosenstiel School of Marine and Atmospheric Science, University of Miami, for my Ph.D. studies in 1976 and immediately started my field work in the Caribbean and South America. While travelling in Colombia and Venezuela, I befriended several shrimp boat captains and I volunteered to work on their boats for free (if I could keep all the shells that came up in the nets!). For four years, I worked with the Vikingos de Colombia shrimp company (in Cartagena, Colombia) and was able to visit many unexplored areas, such as the Goajira Peninsula, the Golfo de Morrosquillo, and the Golfo de Uraba. I collected twenty species of cones, alone, from one trip to the Goajira Peninsula; including *Dauciconus vikingorum* (named for the shrimp company), *D. goajira*, *D. poulosi*, *D. penchaszadehi*, *Gradiconus gibsonsmithorum*, *G. paulae*, and *G. parascalaris* (all of which were new to science).

Unfortunately, the Cartagenera, the boat that I usually worked on, was later captured by drug gangs off the Goagira Peninsula. The entire crew was shot and thrown overboard and, after being used for running drugs, the Cartagenera was later sunk off San Andres Island. With all the trips that I made on the shrimp boats, I came within one year of being killed by drug lords! Having avoided being shot, I received my Ph. D. in Oceanography from the University of Miami in 1980.

All this research and travel really paid off, as I was able to discover and name 90 species of worldwide living cone shells and 85 fossil cone species (mostly from Florida), and around 1,200 species of living and fossil gastropods in total (covering 53 families)[Note: Ed Petuch has published 15 books on living and fossil mollusks and 150 scientific papers. Ed.]. Of these, my favorite living cone species are the Bahamian *Lindaconus lindae* (400 m depth), *Purpuriconus theodorei*, and *P. richardbinghami*, the Honduran *Tenorioconus harlandi*, and the Senegalese *Africonus echinophilus*.

I'm still involved in intensive field work and have been concentrating my efforts on the Florida Keys. This past summer, I rediscovered the "lost" *Dauciconus aureonimbosus*, a beautiful yellow, orange, and pink species that lives in deep water north of the Dry Tortugas. I also determined that the Florida Keys coral-dwelling *Gradiconus anabathrum tranthami* (Petuch, 1995), originally named as a subspecies of the western Florida *G. anabathrum anabathrum* (Crosse, 1865), is far more variable than I originally thought and extends all along the Florida Keys, from Key Largo to the Dry Tortugas. The recently-named *G. antoni* Cargile, 2011 and *G. tortuganus* Petuch and Sargent, 2011 have now been found to be simply color forms of the highly variable *G. anabathrum tranthami* and should be considered to be synonyms. These kinds of exciting discoveries and insights are what keep me going in science!

For the past 28 years, I have been a Professor of Geology in the Department of Geosciences at Florida Atlantic University in Boca Raton, Florida (part of the Florida State University System, with over 33,000 students). As a marine biologist by training, I teach oceanographic classes such as Coastal and Marine Science, Ancient Marine Environments, and Marine Paleoecology. I also teach classes in Physical Geology, Paleontology, and the Geology of Florida. My wife of 29 years, Linda, is an elementary school science teacher. She is unique in that she has 87 species of mollusks named for her, the most taxa for any single person. We now live

on Singer Island, north of Palm Beach, between the beach and the Lake Worth Lagoon. Linda and I enjoy frequent visits from our three children, none of whom became a malacologist. I can always try to influence the grandchildren!

Nineteen days at Praslin (Seychelles): Looking for new species of *Conidae*

David Touitou

Introduction

Here is a new chapter of our adventures at the Seychelles, once again concentrating in the *Conidae* family. I was hoping to find new and rarer species this time and for that I was prepared to dive to deeper waters. I would also like to find a second specimen of *Conus omaria*, in order to observe the potential local variability of the species.

Preamble

Contribution to the knowledge of the species of *Conidae* occurring in the Seychelles.

For several years I have been studying the malacological fauna of the Seychelles. So far, I have only been able to dive around granitic islands (Praslin, la Digue, Félicité, Grande Soeur, Petite Soeur, Curieuse, Mary Anne, Frégate, Silhouette, Île du Nord, Aride, Îlot Coco, Îlot Ave Maria, Cousin & Cousine).

I am fortunate to have a good field manual, Marine Shells of the Seychelles (Carole Green Publishing, 2000), by Alan Jarrett. This book is an excellent local guide covering also the Bivalves! There is a detailed text for each species (something that is becoming increasingly rarer nowadays…) and in it we find priceless information about habitats.

Over 10 years of searches of the local reefs have enabled me to come across every species of *Conidae* (except for *Conus quercinus*, *C. figulinus* and *C. betulinus*) and *Cypraeidae* reported for depths of down to 10 metres. I have been able to find the following species of Cones (in the this list, usual depth is indicated after the name of each species and a measure of rarity is giving by numbers from 1 – common – to 6 – very rare):

Conus arenatus (0-10 m) 1
Conus aulicus (0-20 m) 4
Conus bandanus (5-20 m) 3
Conus canonicus (0-20 m) 2 (locally 1)

Conus capitaneus (lagoon) 5
Conus catus (0-5 m) 2
Conus chaldeus (0-5 m) 1
Conus coronatus (0-5 m) 1
Conus distans (0-10 m) 2
Conus ebraeus (0-5 m) 1
Conus episcopatus (0-20 m) 3
Conus flavidus (0-20 m) 1
Conus frigidus (0-10 m) 2
Conus miliaris (0-10 m) 2
Conus geographus (0-10 m) 3
Conus gubernator (0-20 m) 4 (locally 3)
Conus imperialis (0-10 m) 3
Conus legatus (15-20 m) 4
Conus leopardus (10-20 m) 1
Conus litoglyphus (0-20 m) 2
Conus litteratus (0-10 m) 2
Conus lividus (0-10 m) 1
Conus maldivus (0-5 m ?) 4
Conus miles (0-10 m) 3
Conus moreleti (0-20 m) 3
Conus namocanus (0-10 m) 4 (locally 2)
Conus nussatella (0-10 m) 3
Conus omaria (15 m plus) 5
Conus parvatus (0-10 m) 2
Conus pennaceus (0-20 m) 4
Conus rattus (0-10 m) 1
Conus sanguinolentus (0-10 m) 3
Conus sponsalis (0-5 m) 3
Conus striatellus (0-20 m) 5
Conus striatus (5-10 m) 4
Conus tenuistriatus (5-20 m) 5
Conus tessulatus (0-5 m) 3
Conus tulipa (5-10 m) 4
Conus varius (0-20 m) 3
Conus vexillum (5-10 m) 4
Conus violaceus (0-10 m) 3
Conus virgo (0-20 m) 2
Conus zeylanicus (0-15 m) 4

On the other hand, so far I have been unable to find the following species, mentioned in the aforementioned *Marine Shells of the Seychelles*:

Conus abbas; mentioned for a depth of 40 m
Conus ammiralis mentioned for a depth of 20 m
Conus auricomus mentioned for a depth of 8 m plus
Conus betulinus mentioned for a depth of 5 m plus [the presence of *C. betulinus* is confirmed, since natives have found beached specimens at Praslin, during the partial filling of Ste. Anne Bay]
Conus bullatus mentioned for deep water
Conus crocatus (unknown depth)
Conus cylindraceus mentioned for a depth of under 10 m
Conus figulinus mentioned for a depth of 10-30 m
Conus keatii (in dredgings)
Conus luteus mentioned for a depth of 8 m plus
Conus mitratus mentioned for a depth of 10 m plus
Conus obscurus (unknown depth)
Conus pertusus mentioned for a depth of 10-12 m
Conus quercinus mentioned for a depth of 10-25 m
Conus zonatus (unknown depth)

I also never found *Conus barthelemyi*, which is mentioned for the area in the *Manual of the Living Conidae* and in an unverifiable testimony.

Our stay

Wednesday 13th April: departure from Nice

Thursday 14th April: Arrival at the Seychelles

Friday 15th April: Beginning of the survey

First outing at last, after a whole year of abstinence! We follow the coast, with my 6 year old son Moana, already an accomplished swimmer. The bottom is accessible (4 to 6 m), but apnea is painful. I barely have the time to sweep the sand from the rock slabs before my lungs order me to return to the surface…

Of course, one always hopes for some unexpected luck and in that area it is just as possible to find *Conus gubernator leehmani* after a 10 minutes search as after 6 hours of prospection! And so I begin diving in apnea. At last, after about thirty minutes, we go back to the beach. A few shells like *Conus arenatus* (buried in sand under a piece of dead coral), *Cypraea fimbriata* and *Cypraea helvola* have been spotted.

Saturday 16th April: Launching the boat

This is always something of a trial, because in the islands everything takes time, a long time…

Sunday 17th April: We get lucky

This time I go out alone for one hour of snorkelling. Just like Friday, I go along the same coast looking for uncommon to rare species, especially within *Conidae*. Without thinking, I concentrate on one Cone in particular, the "*leehmani*" form that fascinates me. Each time I sweep the sand with my hand, I appear to see that slender orangish (thick periostracum) silhouette, almost to the point of hallucinating: a mere piece of shell, coral or stone of approximately the same colour makes my heart to wild!

I come across *Conus flavidus*, *Conus miliaris*, *Cypraea helvola*, and then *Conus tessulatus*. The hour advances. I go a bit more to the large and my apneas get longer. I search a small sandy bottom sprinkled with porites at a depth of 6 to 8 metres. I aim at two slabs close to a huge bulk of living coral. I dive with my eyes closed (to save a few precious seconds). I reach the bottom, lift the two slabs and sweep the sand once again. And there, miraculously, the shape so eagerly looked for appears: a beautiful medium sized *Conus gubernator leehmani*. Its pattern is discreet and it is as unique as every other specimen. I turn it around and must face the fact that it is empty! I still consider myself quite lucky, because finding a buried "fresh dead" *leehmani* in excellent condition is still quite something!

Monday 18th April: First sea outing, no luck

The entire family takes to the sea around 9:30 h planning to enjoy a sunny morning. We head to the Île de Félicité. After three attempts, we finally manage to anchor the boat correctly. I go down in apnea to secure the anchorage and we swim to the shore. I push the bag containing beach toys, Nicole carries 3-year old Teiva with her armbands and Moana paddles behind us.

Once the whole family is ashore, I return to the boat to put on my equipment. I have brought a scuba tank and having carried my diving gear with the luggage, it should be put to good use as quickly as possible! I go down and the first thing I notice is that I am not well weighted: I have 3 kg but I failed to consider that I am carrying an aluminium tank… With a slight effort, I get to the bottom (7 metres). I glide towards the open sea but at the entrance of the bay the current is quite strong and I see only a sandy area. I turn left and go along the coast. I am about 10 m deep and have trouble remaining close to the bottom. It is tiresome. I search each slab but must confess that after 25 minutes I am still empty-handed… I have spotted almost no shells, except for a pair of *Cypraea isabella* (one of them on its

eggs) and a *Cypraea teres* dressed in her magnificent red mantle.

What worried me the most is that my buoyancy problem gets worse by the minute. In spite of the porites chunk that I carry to hold me down, my foot fins go up every time I am not going forward. Soon the whole thing becomes unmanageable because the zone I am prospecting is in full current. I head to the cliff, I try to have at least one minute safety platform at 3 metres, desperately hanging from a boulder and then I surface. Out of habit, I pull on my lower exhaust and to my surprise air escapes from the valve when my vest should be empty! Because of a "direct system" problem, my stab was inflating without my noticing it. No wonder I experienced a weight problem!

Well, that's settled, I purge, I disconnect the "direct system" from the vest and go down again. Ah!, what pleasure! Such a feeling of freedom! Once again I begin my search, now in total comfort and I spot *Conus canonicus*, *Conus litteratus*, *Cypraea punctata* spawning and *Cymatium hepaticum*, so the zone is becoming more interesting. Nevertheless, I have the feeling that a boat is turning about and that I am being watched. I raise my eyes towards the surface, about ten metres above me and…rats! At least half a dozen apnea divers are following me, perhaps mistaking me for a huge tropical fish…

How can one look around quietly in such conditions? I am decidedly out of luck! I press on in spite of the current and at last I manage to loose the group in a labyrinth of huge rocks. In any case, I have been down for 50 minutes already and I must go back…empty handed! We have a picnic on the boat and my wife tells me that she has found a very nice shining fresh dead cowry on the beach but that the children have lost it as they emptied the bag on the sand. She tells me that it was not a common cowry (she has developed a sense for the rarity of shells, could it be otherwise?).

She described the shell, light coloured, about 30 mm long, a dark blotch on top…Oh my goodness! *Cypraea stolida*! After so much time combing the coasts of the Seychelles, I have found only three specimens! It is quite rare locally. I decide to go back to the beach and search the area where they had been, but to no avail. Teiva must have surely thrown it into the water, just like he likes to do with bits of coral littering the beach. This is decidedly a bad day for shells!

A spot of fishing gives us the pleasure of catching a couple of nice fishes, a "white captain" and an old red fish, which shall be enjoyed for dinner on the same evening. Back home, Nicole checks the identification of the lost cowry in Alan Jarrett's book, and it was really a stolida!

Tudesday 19th April: Anse Lazio, the magnificent

Towards mythical Lazio cove. Moana and I go snorkel along the granite coast. The best thing here is that in shallow water we see hundreds of fishes, sometimes turtles and of course seashells. This morning is "son training time". At the age of 6 it is time for him to start finding beautiful things! We snake among the granite rocks; I examine the crevices looking for possibly a *Cypraea mappa*. In a sand patch I spot a nice *Conus miles* and I ask Moana to find it by himself, which is not an easy exercise for him, because it is half encrusted… As we proceed, the exercise is repeated, this time with a *Conus rattus*. I lift a few slabs but there are no surprises, only the typical *Cypraea helvola*, always very common. Moana finds a large number of rock shells (Drupas). We also find *Conus lividus* in a crevice, then *Cypraea lynx*. A bit farther ahead, Moana spots an old *Cypraea histrio*. His eye begins to focus… Some will train dogs to find truffles; others will exercise their children to hunt down seashells… Each time I follow the banks of Lazio cove, I find fresh dead cowries, some 99% of which *Cypraea histrio* and *Cypraea caputserpentis*. I hope to be able to give him the opportunity of finding his first shining cowry… I go under a rock but the wave

turns me around and I hurt my elbow. Always a nice thing…

At last, around the first head, lying close to a rock, a beautiful very freshly dead *Cypraea histrio*. Moana is quick to see it. On our way back we will be lucky enough to repeat the experience with a fresh dead *Cypraea caputserpentis* and he will even find a living specimen hiding in a slight fissure. He is getting the hang of it…

Thursday 21th April: A great day at sea

Leaving the house at 8:30 h. Towards a nearby island by boat, in spite of a strong North wind. We stop at the Anse La Farine for a quick bath and resume our trip. A good pick, the intended bay is completely sheltered. What's more, we were not the only ones to think of it: five other boats are anchored there.

We anchor in front of the reef. After a light meal Nicole goes snorkelling along the coast and scans the huge granitic rocks to find fresh dead shells. She will return with a very beautiful *Cypraea histrio* that is darkish as is sometimes the case locally. We get to the beach via a pier and the children can play on the sand. Time for me to do a little research…

I have two choices: either the small lagoon that has always housed *Conus canonicus*, often of good size (the advantage being that the lagoon is no deeper than one meter and water temperature must be around 34º C), or the outer slope that goes down about a dozen metres (the dead coral plaques are plentiful on a sandy bottom).

To be honest, slackness prevails and moreover it has been some time since I last had the pleasure of enjoying myself in such shallow water, not needing to go up and down, only swim around and search… So, I decide to take along my digital camera within its Ikelite

box, to capture images of some cones and cowries. As expected, some ten *Conus canonicus* will be found. I also come across *Conus lividus*, *Conus sanguinolentus* and *Conus moreleti*, the latter a less frequent species. I also find some broken pieces of *Conus nussatella*. As for cowries, I found dozens of *Cypraea histrio* and *Cypraea annulus*, plus one *Cypraea caurica*. Naturally, there were also many shells belonging to other families… whose names I do not know (a little book search would enlighten me).

A little fishing by the end of the day and the evening meal is secured (two "white captains", one of them weighing over 3 kg). My tank has not been used, but I do have a plan B. For some time I have been wanted to search the "deep" zone (probably 10-15 m

at its deepest) of the *leehmani* bay. This species appears to approach the shore twice each year: in November and in February-March. During the rest of the year, I find it only rarely and I believe that the colony lives farther offshore. So, I plan to go there on the morrow, very soon, before many people get there. Who knows? Perhaps I will be fortunate to find other species that I lack from the area and that are indicated for depths of around ten metres: *Conus quercinus*, *Conus figulinus* and *Conus betulinus*.

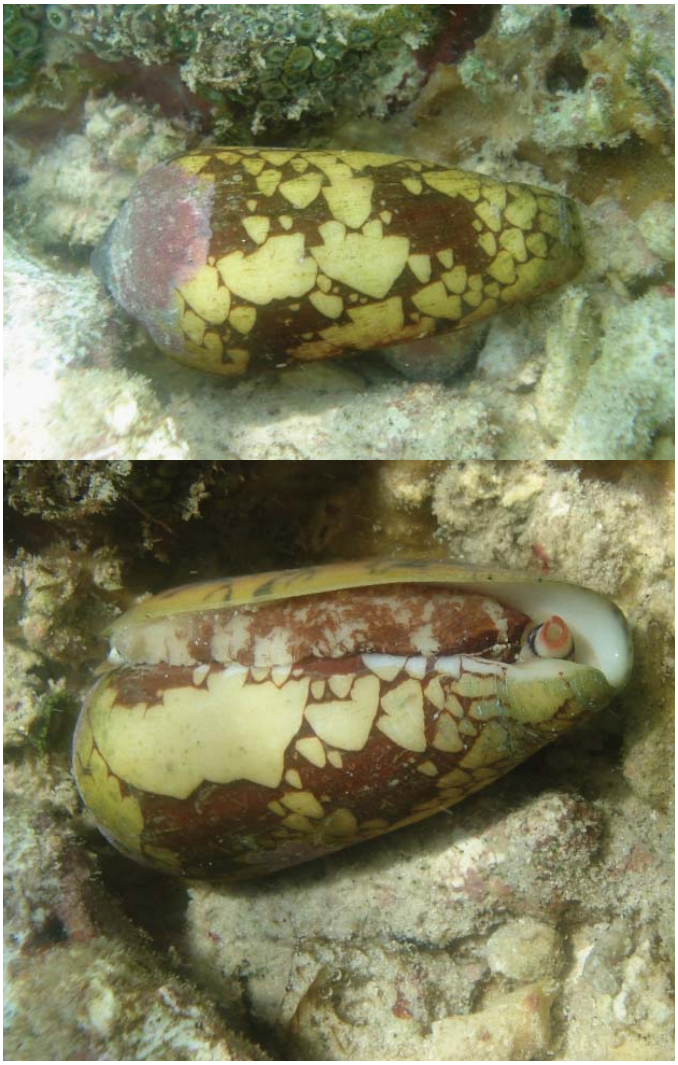
Friday 22nd April: Disappointment

07:00 h. As planned last evening, I depart to prospect an area in the centre of the targeted bay. After diving for one hour, a bitter realization: nothing! Apart from a large *Conus bandanus*, nothing interesting to get. Certainly a few common species are to be found: *Conus rattus*, *Conus lividus*, *Conus arenatus* (following the traces), *Cypraea helvola*, *Cypraea carneola*, *Cypraea caurica*. I should have gone farther offshore… A bay can be so big at times!

Saturday 23rd April: "On the sea again"

Departure by boat at 10:00 h. Unfortunately, the wind is present again and even if the sea is not too rough, some spots are out of bounds for us.

We anchor near the same reef we visited last Thursday. I go for a bit of snorkelling and once again I choose a small shallow lagoon in an inlet close to the one I visited last time. A true delight, everything is within reach. First observation: the area is as rich as I remembered it to be. Each slab hides one or two *Cypraea histrio* and I also find *Cypraea talpa* spawning. When it comes to *Conidae*, *Conus canonicus* is still king. Each specimen is unique and a joy to find. I also find two *Conus geographus* under huge stones. Nevertheless, deep inside me I know what I am looking for: in this same place I



once came across the wonderful *Conus episcopatus*!

I find *Cypraea caurica*, *Conus lividus*, *Conus coronatus*, *Conus rattus*, and then… under a slab, *Conus episcopatus*! I knew it! It is really a superb cone! A little later, after a spot of fishing that will provide us with two trevallies, I take Moana to the same lagoon and of course the *Conus episcopatus* are still there, sometimes in pairs. We pass the reef and go along the coast. We see *Cypraea erosa* spawning, pieces of *Conus canonicus*, a beautiful fresh dead *Cypraea histrio*, *Lambis chiragra* and *fasciolarids* (*Pleuroploca filamentosa*, according to Alan Jarrett's book). I had considered one stop on the way back for scuba diving in the place of the giant *Conus legatus* (see

Xenophora # 132), but because Teiva has fallen asleep in her mommy's arms and also because the sea is a bit rough in the anchorage place, I give it up. Decidedly, I cannot manage an adequate dive!

Sunday 24th April: Luck appears to have deserted me completely

Meeting an old friend and excellent fisherman at the boat by 11:30 h, so that he can assure safety from the boat. After navigating 10 minutes we arrive at my favourite spot, where in the past I have found almost the whole panoply of "triangle patterned cones": *Conus canonicus*, *Conus episcopatus*, *Conus pennaceus*, *Conus aulicus* and *Conus legatus* (including four monster specimens). Only *Conus omaria* is missing.

My friend throws the anchor and directly the boat stabilizes on the agitated sea. In the previous evening, while preparing my stuff, I noticed that my tank was full at 150 bars (instead of the usual 200), which means that diving time will be reduced, which is a pity. I go down and head to the bottom. There is a strong current, even near the bottom, which will further reduce my diving time. Also, constantly lifting stones and dead

coral raises the consumption of air when we are below 10 m! I begin my searches at once. Lifting a slab I find a large fragment of… *Conus omaria*! The circle is closed and I think to myself that this is a good omen. I wander in the 15-18 m zone and come across a good number of common cowries, mainly *Cypraea carneola*, and one dead *Cypraea hirundo francisca*, but not many cones. 20 minutes already and still nothing!

At last I find *Conus canonicus* (no point in diving just for that), two *Conus episcopatus* (one of them small) and two pretty murexes. Nothing to get excited about. Unfortunately, my diving is coming to an end, after only 45 minutes. I am almost out of air. Poor luck still accompanies me! This will undoubtedly be the worst collecting of the last ten years!

Monday 25th April: An outing by boat fertile in findings

The wind is still present, one must get used to it, but the sea is not too bad. We travel to a nearby island, anchor near the reef and then the four of us (Moana snorkelling and Teiva on a buoy towed by Nicole) go explore the small lagoon where in the past I have always found interesting species (*Conus episcopatus*, *C. canonicus*, *C. violaceus*, *C. nussatella*). I search the entrance, where I once found *Conus violaceus*. Nothing this time.

We go along the reef in the inner side and quickly, under a small slab, I find *Conus violaceus*, not buried in the sand as always. That's nice! We proceed with our search and come across dozens of *Cypraea histrio, Cyp. caputserpentis*, *Cyp. helvola*, *Cyp. annulus* and *Cyp. moneta*; we also find *Cyp. fimbriata* and *Cyp. caurica*. In cones, always *Conus canonicus*, including some large specimens. We even spot a true monster (it must be over 65 mm long), but as always it is covered with concretions and dressed in that "verdigris" typical of very old eroded specimens… a pity! We have our picnic on the boat, and then Moana and I go back to the lagoon. We inspect a small zone that some ten years ago has rewarded me with a large *Conus episcopatus*. I am not superstitious, but one never knows… Anyway, we must have some reason to select a particular zone, isn't that so?

The number of cowries under the slabs is even higher here! I count up to 7 *Cyp. caputserpentis* per coral slab. It's wonderful. Naturally, we also find *Conus canonicus*. We look for a large one but once again the one we spot is covered in "verdigris". We also see *Conus nussatella*, then *Conus catus*, the orange variety! These orange ones are quite rare, they often have scars and seem to prefer the reef itself. In the area there were also several typical *Conus catus*. At last, we do manage to find a beautiful clean and considerably large *Conus canonicus*.

We go a bit farther away from the beach and end up inspecting the near side of the reef where the water is clearer and fishes are plentiful. Some nice pieces of dead coral are there to be lifted. I let Moana play with a large turtle and I begin my search. After three of four pieces of debris lifted, I come upon the good one: a magnificent large *Conus episcopatus* with the pattern that is typical of the area. What a wonderful sight! As is often the case, it lies on the sand and is not buried.

What a pity that today I have left behind by camera… so many photos could be taken!

Tuesday 26th April: At long last a cone-rich dive

In the morning we leave towards Lazio cove. The bay is very sheltered from the "suet" (southeast) wind and it's great for the kids. There are 18 anchored boats this morning! Meeting on the boat at 12:45 h with Véronique, a friend diver and camerawoman, and Exes, the fisherman.

We go dive at the Soeurs. There is not much to choose from: under the wind, every diving spot is windy. I have checked the tides and today the coefficient is minimum, which is great! What's more, we will be in the water practically at the on setting of high tide. All adds up to a weak current. After 20 minutes navigation on rough sea, we cross the channel that separates the Grande Soeur from the Petite Soeur. The sea gets progressively calmer as the island shelters us from the wind.

Finally, neither Exes nor Véronique are sure of the exact spot, a rock that in that area would rise to the 5 m zone and hence would be visible from the surface. Exes spots coral and we anchor. We go down and there… stupefaction! Nothing but sand 15 metres below. I remain at the surface to try to figure things out. The boat has drifted far, which means that it had not hooked the rock like Exes had assured us. Véronique follows the trail left by the anchor on the bottom, in order to reach the first rock. I see sombre masses ahead but Véronique is already too far away. Never mind!

I rejoin her, thinking to myself: "rats, another failed dive". At 17 m we follow the trail that ends in the middle of nowhere. After a few astonished exchanges we go towards the left, that is to say, away from the shore. The bottom presents a fine sandy layer on the rock platform and here and there is a small plaque of dead coral, a sponge, a small living coral, in a word, at first sight a desert.

I follow Véronique, at the same time inspecting the few slabs that I meet on the way. The good news is that if there are any cones around they will necessarily be in those few hiding places. At last we come upon two medium-sized granitic boulders with some life and some more dead coral to lift. Véronique films a group of fishes and I begin my chore at a certain distance, so as not to spoil her takes.

At first it is a bit frustrating, but then, between the two boulders, under a small slab, appears a bulky cone. It is nothing less than a large *Conus pennaceus*! It must be old because it is partially encrusted. Hope is reborn. I search one section of the area and a bit farther I find *Conus imperialis* and *Conus litoglyphus*, then, lifting a slab very near a small rock I find *Conus omaria* with two Olives! Excellent! I had dreamt of it. I had not found it alive but once, diving at a depth of 17 m like in this occasion. It would seem that the species does not live any higher up on the Seychelles.

In any case they are magnificent. This one is Gem. We leave that small harbour of life and glide along a slope that takes us gently down to 20 m. Always the same thing, sand with some bits of coral here and there. I think this is the basic bottom in the Seychelles. I lift a small slab and in the finer sand below I find *Conus gubernator*! Two metres away, under a larger plaque, a second one, larger and beautifully patterned! Brilliant! I also see several *C. litoglyphus*, then *C. arenatus*, *C. moreleti*, *C. varius*, *C. virgo*, *C. imperialis* and *C. bandanus*. I do not even look at the undersides of the slabs I turn, which prevents me from finding

Cypraeidae. I am focused on cones. I think cone.

Presently the sand sinks, turning into a real ski slope. We are already at 21 m. Véronique asks me if we go down or not. I honestly want to, but this dive as lasted for 45 minutes already and I don't have much time left before the platforms; I am between reserve and 100 bars. So, we remain in the zone, starting our way up. Nothing more will be found. We will have our mandatory 5 minutes stops, then 3 minutes safety and we will be back on the surface after 66 minutes.

Nevertheless, the balance is positive! We arrange a new meeting for Thursday, and this time we will choose an emerged rock… Anyway, I can say that I dove on the true "Seychelles bottom", where clubs never go. Slabs covering sand sprinkled with bits of dead coral, discrete madreporic formations, a small granite rock here and there and… cones! All things considered, it is probably worth it to abandon the usual diving spots for that type of habitat, where hiding places are missing!

Wednesday 27th April: When the night brightens up

In the morning, we leave once again towards the nearby islands. We visit two small lagoons and find the same species as in the previous days, large *Conus canonicus* being always of the "verdigris" sort. I essentially aim at *Conus episcopates*. Luckily, I see one and take the opportunity to get some under water photos.

In the evening we go for a night dive together with Véronique. My initial joy flees when I realize that we are going to dive around the St. Pierre islet. I have dived both during the night and the day in the zone and it is a dreadful malacological desert, except if one goes farther away over the sand. Deep around the island or a dozen metres down… nothing!

Véronique, my partner, will remain close to the rock to film the nocturnal life, so I will go back and forth to the sand to check the trails. After 10 minutes I am wondering what do I do there. But passion takes hold of me and I think to myself that when I had been in the area before at night I had found on the sand one *Conus gubernator* and one *Conus zeylanicus*. So, I inspect every trail to try to find *C. zeylanicus*. I come across *Conus virgo*, *C. litteratus*, *C. leopardus*, *C. flavidus*, *C. arenatus* (essentially by following the trails), *C. tessulatus* uncovered, *C. distans* and also some Terebras and one Olive. No matter how hard I look

for the desired species, I find only *Conus arenatus* each time. 66 minutes diving… Drawn a blank, so to speak!

Thursday 28th April: Last dive

After one morning spent with the family at Lazio cove, we leave again towards "Roche Marianne" to scuba. I have never dived there. We have selected it because it is deeper and at last we will be able to search at 25 m plus! On a strong sea, we arrive at the site where a large rock emerges off Félicité Island. One cannot miss it.

We plunge into very clear water, with a weak current. The descent allows us to enjoy the vastness of the zone. Huge granitic rocks are planted in the blue surroundings. We reach bottom at 25 m, go around the huge rock and I start my search. The problem is that the place is littered with large oyster shells and there are not that many pieces of dead coral. We are now at 28 m. I think to myself that there I am going to find THE CONE! Why not *Conus ammiralis*, *Conus bullatus* or *Conus crocatus*? Who knows?

I hasten to turn everything within reach, but nothing. I do not even find broken shells and that worries me a little. At last, two cones appear simultaneously, *Conus gubernator* and *Conus varius*, both small. Rats! I could as well have found a large *gubernator*, resembling the *pramparti* (*nomen nudum*) from La Reunion… But no. We go up a little and get back to 20 m bottoms. Still nothing. I see one *Cymatium aquatile*, a large *Terebra maculata* at the end of a trail… a complete misery. 35 minutes already!

We are at 18-20 m. I see a dead crabbed specimen of the rare *Conus striatellus*, a young *Conus varius* and two large ugly *Cones bandanus*. It's frustrating. My computer shows the platforms. I search a bit more, just in case… and 19 m deep I find *Conus canonicus*, *Conus episcopatus* and, at last, an uncommon species, *Conus*

legatus, all medium sized. In fact, that zone has more rocks and bits of dead coral. Hence an observation: cones do not hide under large dead oyster shells. So, next time I happen on such a zone I will concentrate on dead corals only. One learns…

Friday 29th April: Last outing with the boat

We leave for the islands. We anchor the boat at the head of the reef to inspect the coast. We leave, all four of us, Moana snorkelling and Teiva on her buoy that we tow behind us. This time I have not chosen to prospect a small lagoon, so we go for deeper apneas… I decide to concentrate on the large slabs only, so if we find something it will be something heavy, large *Conus episcopatus* or *Conus aulicus*… It is certainly a zone for *Cypraea argus* and I do spot two dead ones. The bottom is sandy, littered with debris and here and there a large granitic rock.

We go to the end. I search the slabs in the 8 m zone. It is quite tiresome, especially since after having lifted and held a large plaque I don't have much air left. First finding, a nice *Conus episcopatus*. The rest of the family returns to the boat, I stay a little longer. I probe and lift a fine slab and there a monstrous cone awaits me. At first view it is *Conus aulicus*, but the spire is not pointed. It is an *episcopatus*! What a monster! It must me my local record, and what is more it is not broken. A bit farther ahead, yet another *Conus episcopatus*. And naturally I come across other more common species.

On our way back, I bargain with my wife and daughters one stop near the barrier of the Digue Island, where last year I had found the uncommon and majestic *Conus pennaceus* in the lagoon (which is not its usual habitat in the Seychelles). We anchor near the passage and while the family fishes I go prospect the zone. I get into the lagoon and choose the right side. Good shot! The third boulder will reveal a wonderful *Conus pennaceus* in perfect condition. The sight of that cone, half buried, is truly a moment of happiness that I can share with you, thanks to my camera. A lucky strike. After that, I will find no others for 40 minutes… Luck comes and goes… Briefly, a fine day. One can dive for

4 hours and find nothing, or else swim for 10 minutes and find a rarity!

Saturday 30th April: Exit in Taxiboat

We leave in Taxiboat towards Curieuse Island. We are left on the "plage de la maison docteur" ("beach of the doctor house"). It is a wonderful place, without reef. I have not planned to look for shells. Nicole goes for a bit of snorkelling and I ask her to search around a rock emerging near the shore, in case there are some Olives buried there. She reports that after the sand there is a giant area of "turtle grass". I think to myself that

the zone may house *Conus betulinus* and go search for about twenty minutes, but find only *Conus leopardus* and *Conus virgo*. Back on the beach, I decide not to put my right shin in the sea again, because a wound caused by a fall on some rocks, as I was regaining the boat, at the beginning of our stay, is getting a bit ugly, having suffered the daily assaults of salty water.

Sunday 1st May: Putting some order into the house No bath for daddy, it's a real torture...

Monday 2nd May: Departure to Mahé

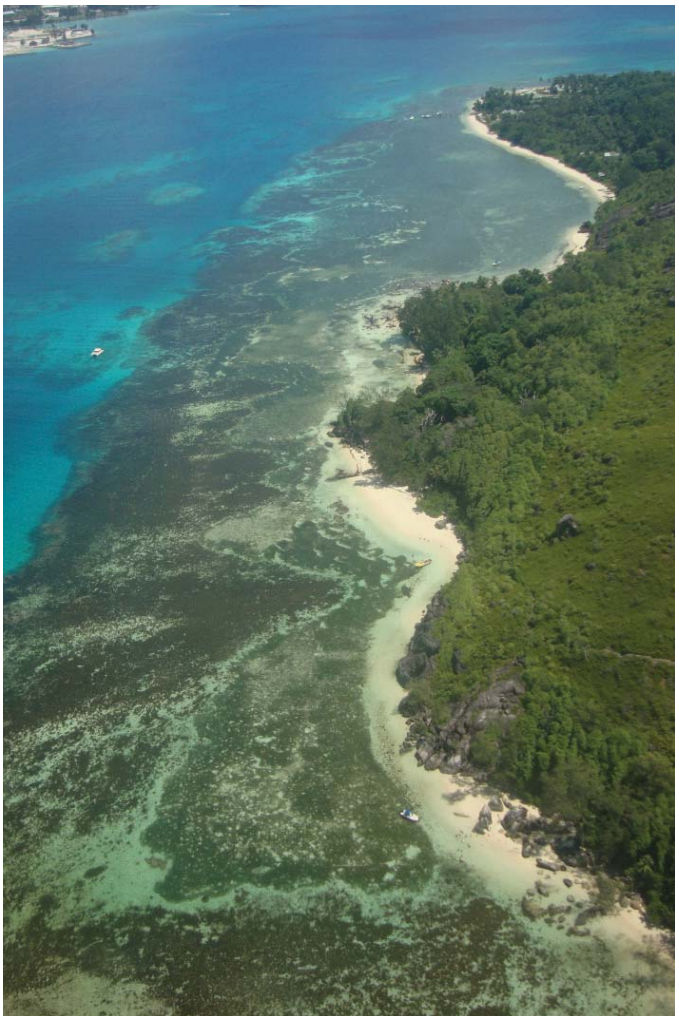
We leave Praslin for Mahé at 11:15 h. We sleep at the Coral Strand Hotel, on the Beauvallon beach. Departure to France is scheduled for early the next day. Something bothers me. In his book, Alan Jarrett specifies that *Conus betulinus* is not frequent, but that in the Beauvallon bay it is very common in the 5 m zone. So, we are on the spot. I have my mask at hand, but it will be bad for my leg… Qhat a dilemma! I decide not to swim.

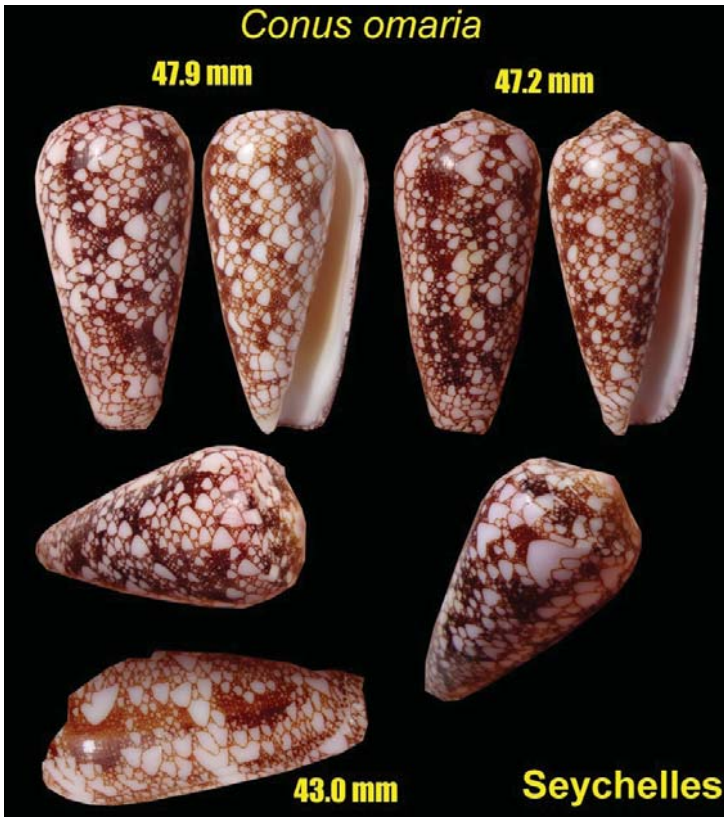
Tuesday 3rd May: Flight to France

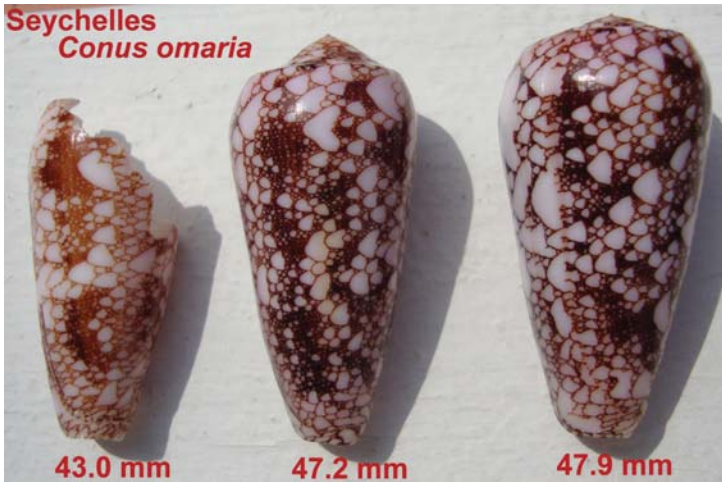
Conclusion

This trip allowed me to reach one of the two goals I had in mind, namely to find the rare *Conus omaria*. Except

for the three species mentioned in the preamble (*Conus betulinus*, *Conus quercinus* and *Conus figulinus*), it is certain that only regular dives with tank will allow me to hunt down the species I have not yet found. During this stay I have gathered good information about the deeper fishing spots (not far from Praslin), in the 30-40- m range. To be continued…







The original version of this article appeared in Xenophora 128.

Cone Types in Portuguese Institutions
1. The taxa described by Barros e Cunha

António Monteiro

António Augusto de Carvalho Monteiro (no relation to TCC's editor…) was born at Rio de Janeiro, on the 27th November, 1848, of Portuguese parents, and died in Sintra, Portugal, on the 14th October, 1920. From his father, he inherited a huge fortune – to which he still added, through commerce of coffee and precious stones – and also the nickname of Millions' Monteiro (now you see why there is really no relation to TCC's editor…), by which he was generally known.

He graduated in Law from the university of Coimbra, and became a person of vast culture, in various fields, from literature to science and music; he was a great admirer of Wagner. Besides that, he was a zealous colector – his collections of pocket watches, butterflies and seashells were particularly noteworthy – and a distinguished bibliophile.

Nowadays, Carvalho Monteiro is mainly remembered as the builder of the stately Palácio da Regaleira, in Sintra. Projected by the Italian architect Luigi Manini, the building is a tribute to the glorious era of Portuguese maritime travel; the style used is predominantly "neomanuelino" revival, and it also includes gothic and classical elements, as well as a vast number of esoteric symbols related to alchemy, freemasonry, the Knights Templar, etc.

The Natural History collections of the famous and rather excentric millionaire are currently housed in the Zoological Museum of the University of Coimbra.

On the 25th October, 1865, João Gualberto de Barros e Cunha – who would later (from 1932 to 1935) become a Zoology professor at the University of Coimbra – was born in Lisbon. He authored numerous works within the fields of Biology and Anthropology, and was a member of several scientific societies. Barros e Cunha died in Torres Vedras on the 5th October, 1950.

In 1933, he published, in No 71, Series 1 (pages 1-224) of the Memórias e Estudos do Museu Zoológico da Universidade de Coimbra, the "Catálogo descritivo das conchas exóticas da colecção António Augusto de Carvalho monteiro. Família *Conidae*". In this catalogue, 191 species and subspecies are included, some of them described as new.

Unfortunately, all the taxa described by Barros e Cunha ended up as synonyms of previously described ones. Nevertheless, as validly described names, they must be taken into consideration in any revision of the family *Conidae*.

Back in 2001, our good friend and well known malacologist Robin Michael (Mike) Filmer published his important work *A Catalogue of Nomenclature and Taxonomy in the Living Conidae 1758-1998* (it was published in the Netherlands by Backhuys Publishers and a supplement updating it to 2008 is available from several suppliers).

The book consists of a listing of all names applied to species and subspecies of Cones, with, for each name, the name of the author, name and date of the original publication, the whereabouts of the types and an assessment of its nomenclatural and taxonomic status; the book also includes several indexes, appendixes and different listings. The author has carried on working on his catalogue and about that we hope to have some important news soon.

It was precisely this continued work that took me to Coimbra recently, to examine the types of the taxa described by Barros e Cunha, from specimens in the Carvalho Monteiro collection. Contact with the Zoological Museum was easy, through the intervention of my good friend Pedro Callapez, a keen shell collector and professor of Geology at the same University. Thanks to him, a visit was arranged for the first days of November.

In the museum, we were met by Ana Cristina Rufino and the museum's curator Paula Campos, who were

quite helpful in locating the specimens we wanted to examine and photograph. The Carvalho Monteiro collection is stored in plastic boxes, according to the numbering used by Barros e Cunha in his catalogue. Our search produced the following results:

1) *Conus concolor* Barros e Cunha, 1933.
Holotype 22.9 x 15.1 mm (SS *pigmentatus*)

Catalogue number: 43
Found
One box with 1 specimen
Dimensions: 22.9 x 15.1 mm

These dimensions correspond to the ones for the holotype, hence this specimen is the holotype of *C. concolor* Barros e Cunha, 1933

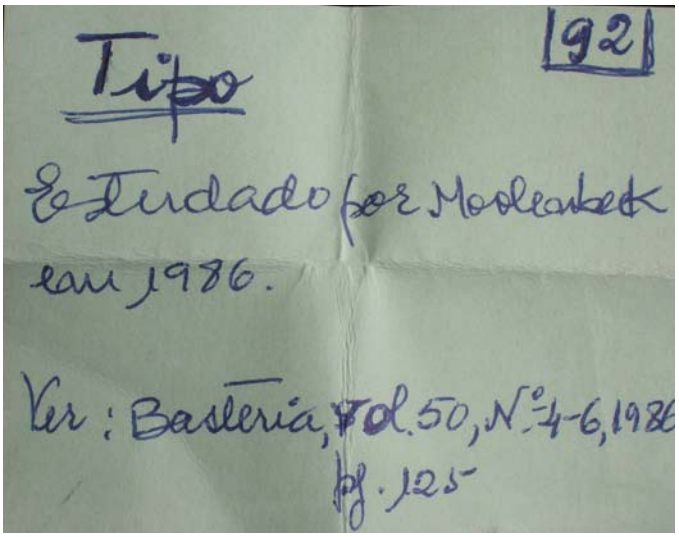
2) *Conus erythraeozonatus* Barros e Cunha, 1933

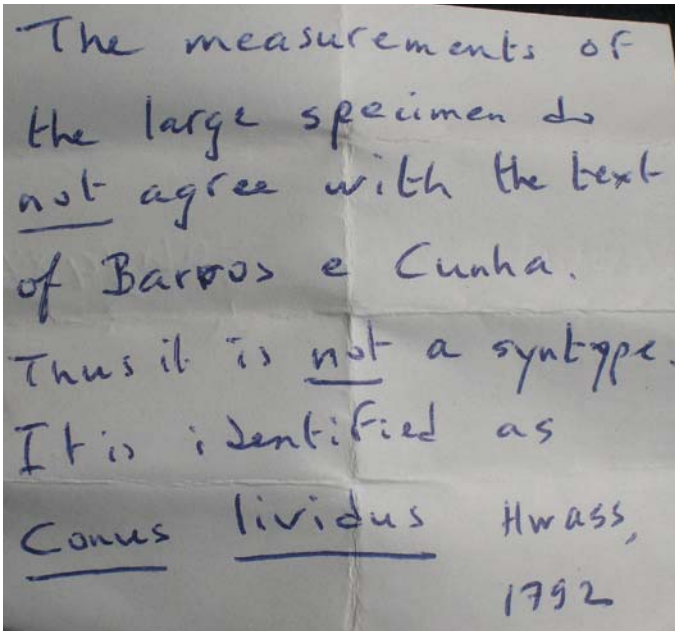
Lectotype 32.7 x 19.4 mm
Catalogue number: 92
Found
One box with 2 specimens
Dimensions: 32.7 x 19.4 mm and 48.5 x 26.9 mm

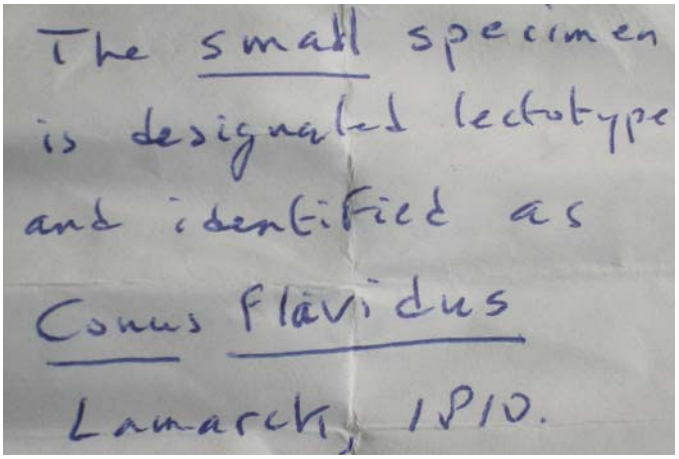
The dimensions of the smaller specimen correspond to the ones for the lectotype, hence this smaller specimen is the lectotype of *C. erythraezonatus* Barros e Cunha, 1933

These specimens have been studied by Robert Moolenbeek and in the same box the following labels were found:

(next page)







3) *Conus flavescens* Barros e Cunha, 1933
2 Syntypes 42 x 25 & 39 x 20.5 mm (SS *imperialis*)

Catalogue number: 10
Found
One box with 2 specimens
Dimensions: 42.0 x 24.0 mm and 39.0 x 20.5 mm

These dimensions correspond to the ones for the syntypes (with a very slight difference in the measurement of the larger one), hence this specimens are the syntypes of *C. flavescens* Barros e Cunha, 1933

4) *Conus fuscus* Barros e Cunha, 1933
8 Syntypes (SS *lugubris*)

Catalogue number: 166

Found
One box with 2 specimens
Dimensions: 15.0 x 8.4 mm and 10.5 x 6.7 mm
These must be considered as (part of ?) the syntypes of *C. fuscus* Barros e Cunha, 1933

Also found:
One box with 13 specimens labeled *C. lugubris* Reeve, 1849

Dimensions: 16.4 x 8.5 mm (largest specimen) to 10.8 x 7.0 mm (smallest specimen)

All 15 specimens examined are clearly beach worn specimens of *C. ventricosus* Gmelin, 1791

5) *Conus granulosa* Barros e Cunha, 1933
Holotype 33.5 x 18 mm (Var *collisus*)

Catalogue number: not recorded
Found
One box with 1 specimen
Dimensions: 33.5 x 18.0 mm

These dimensions of this specimen correspond to the ones for the holotype, hence this smaller specimen is the holotype of *C. granulosa* Barros e Cunha, 1933

6) *Conus granulosus* Barros e Cunha, 1933
Holotype 47 x 19 (SS *lineatus*)

Catalogue number: 100
Found
One box with 1 specimen

Dimensions: 47.0 x 25.0 mm

The dimensions of this specimen correspond only partially to the ones for the holotype (the length checks, but the width does not); allowing for some mistake in the measurement of the width, this specimen is the holotype of *C. granulosus* Barros e Cunha, 1933

7) *Conus monteiroi* Barros e Cunha, 1933
6 Syntypes (SS *generalis*)

Catalogue number: 67
Found
One box with 4 specimens
Dimensions: 60.9 x 32.3 mm, 55.2 x 27.6 mm, 55 x 27.2 mm and 45.5 x 23.5 mm

These are part of the syntypes of *C. monteiroi* Barros e Cunha, 1933

8) *Conus nigrescens* Barros e Cunha, 1933
Holotype 66 x 39 mm (SS *imperialis*)

Catalogue number: 9
Found
One box with 1 specimen
Dimensions: 46.0 x 26.0 mm

These dimensions do not correspond to the ones for the holotype. The box holding this specimen is a large one, similar to boxes used to hold more than one specimen and in the cotton there are traces of a second specimen having been placed in the box at some time. This

specimen could not be found, hence the holotype of *C. nigrescens* Barros e Cunha, 1933 must be considered lost.

9) *Conus violacea* Barros e Cunha, 1933
2 Syntypes 70 x 38 & 67 x 35 mm (var *achatinus*)

Catalogue number: 138
Was not found
The syntypes of *C. violacea* Barros e Cunha, 1933 must be considered lost.

10) *Conus violascens* Barros e Cunha, 1933
2 Syntypes 48 x 30 & 47 x 27 mm (SS *figulinus*)

Catalogue number: 29
Found
One box with 2 specimens
Dimensions: 48.0 x 30.0 mm and 42.0 x 26.0 mm

The dimensions of the larger specimen correspond to the ones for the larger syntypes; the ones of the smaller specimen do not match those of the smaller syntype, but are close enough to make us think of some error in measurement. Hence, these specimens are the syntypes of *C. violascens* Barros e Cunha, 1933

Cone Species Found in Northern New South Wales

Paul Wilson

I've compiled a list of cones I have found in various northern New South Wales sites. The list is as follows:

1) *C. lividus* Hwass, 1792
45 mm. On rocky reef at low tide, Minnie Water
Collected dead.

2) *C. muriculatus* Sowerby, 1833
38 mm. On rocky reef at low tide, Minnie Water.
Collected dead.

3) *C. papiiliferus* Sowerby, 1834
38 mm. On rocky reef at low tide, Minnie Water.
Collected dead.

4) *C. capitaneus* Linnaeus, 1758
31 mm. On rocky reef at low tide, Woody Head.
Collected dead.

5) *C. ebraeus* Linnaeus, 1758
21 mm. On rocky reef at low tide, Arrawarra Headland. Collected dead.

7) *C. coronatus* Gmelin, 1791
30 mm. On rocky reef at low tide, Angourie. Collected dead.

6) *C. miliaris* Hwass, 1792
29 mm. On rocky reef at low tide, Minnie Water. Collected dead.

8) *C. musicus* Hwass, 1792
14 mm. On rocky reef at low tide, Woolgoolga. Collected dead.

9) *C. imperialis* Linnaeus, 1758
Under rocks at low tide, Minnie Water.

Have also found *C. arenatus* Hwass, 1792, *C. anemone* Lamarck, 1810 and *C. aplustre* Reeve, 1843, but didn't keep and no photo.

Etymology of Cone Species Names C-D

António Monteiro

In this issue of TCC I continue the study of the etymology for Cone species names. In the previous issue I listed species with names beginning with A and B and now we will carry on to C and D.

In the meantime, my good friend Kelly Dhondt, from Belgium added a few comments to the A-B listing, which I am glad to present, as follows (Kelly's comments in blue):

aculeiformis Reeve, 1843
From the Latin *aculeus* meaning "spine" or "prickle" and "sting", hence the "prickle-shaped" Cone

alabaster Reeve, 1849
From the Greek *alabastros*, a finely granulate, often white and translucent, form of gypsum
The Greek word "*alabastos*" or "*alabastros*" was actually used to identify a vase made of alabaster (the stone, coming from the Egyptian city Alabastron), in which was conserved some perfume/balm

algoensis scitulus Reeve, 1849
From the Latin "*scitulus*" (a diminutive of *scitus*, meaning "questioned", "ascertained", but) "handsome", "elegant", "trim" or "neat"

amadis schech Dautzenberg, 1937
"*schech*" is the Yiddish word for "*tinsel*"

ammiralis archithalassus Solander, 1786
From the Greek *thalassa* meaning "sea", with the prefix *archi* meaning "most important" / "the leader of"

amphiurgus Dall, 1889
From the Greek *amphi* meaning "both" and the Greek *ourgos* (= artisan?)
I'm not sure about "*ourgos*", I don't find it in my Ancient Greek dictionaries. "*Ourgatès*" (the Attic crasis for "*ergatès*") means "workman".

anemone Lamarck, 1810
From the Latin (and ancient Greek) *anemone*, meaning "daughter of the wind", applied to a flower and also to animals of the order *Actiniaria*
The Greek "*anemone*" means "windflower" (= *anemone*). "*anemos*" means "wind"

anemone carmeli Tenison-Woods, 1877
The Latin "*Carmelus*" (genitive: *Carmeli*) refers to Mount Carmel (in Israel), but now there are several places called "Mount Carmel"

aplustre Reeve, 1843
Possibly from the Latin "*aplustre*" (not Greek, I think), meaning an ornamental appendage of wood at a ship's stern, usually curved like a bird's feather

araneosus Lightfoot, 1786
From the Latin *aranea*, meaning "spider", referring to the pattern of the shell, that is remindful of a cobweb
The Latin "*aranea*" means "spider", "*araneum*" is "a cobweb" and "*araneosus*" means "full of cobwebs"

arenatus Hwass, 1792
From the Latin "*arena*" which means "sand"; "*arenatus*" means "resembling sand" (referring to the pattern of the shell)

aulicus Linnaeus, 1758
From the Latin, meaning "princely" or "of a prince's court", "a courtier"

aulicus aurantia Dautzenberg, 1937
From the Latin, meaning "golden"
From the medieval Latin "*aurantium*", which means "orange (the fruit)"

aulicus gracianus Dautzenberg, 1937
From the Latin *gratia*, meaning "kindness", from *gratus*, meaning "pleasing" (maybe there is a link with "graceful")

aulicus propenudus Melvill, 1900
From the Latin *prope*, meaning "almost", and *nudus*, meaning "naked" (probably referring to the reduced pattern of the shells)

aurantius Hwass, 1792
From the Latin, meaning "golden" or "orange"
From the medieval Latin "*aurantium*", which means "orange (the fruit)"

austroviola Röckel & Korn, 1992
From the Latin *australis*, meaning "southern", and *viola*, meaning "violet"
The Latin "*austro*" also means "the south – southwest wind".

baccatus Sowerby, 1877
From the Latin, meaning "frenzied"
I can't find that translation anywhere. I think that the Latin "*baccatus*" (also written as "*bacatus*") just means "ornamented with pearls", since "*bacca*" (or *baca*) means "pearl".

balteatus pigmentatus Adams & Reeve, 1848
From the Latin, meaning "colourful" or "painted"

biliosus Röding, 1798
From the Latin *bilis*, meaning "bile" ("*biliosus*" means "full of bile"), possibly referring to the general colouration of the shell

biraghii congruens Korn & Raybaudi, 1993
From the Latin, meaning "compatible", "suitable", "appropriate"

boeticus Reeve, 1844
Possibly from the Greek mythology: *Boetis*, a she-goat (wife of Pan) with which the Greek god Zeus consorted

bruuni Powell, 1958
Named after Anton Frederik Bruun (1901-1961),

Danish oceanographer and ichthyologist
[Note: by mistake, Anton F. Bruun was listed as Dutch in the previous version]

Now, let us proceed to the C-D listing. I should point out that the consideration of species versus subspecies follows Paul Kersten's well known checklist of the living *Conidae*; thanks again to all those who helped (see list in the previous issue of TCC), and special thanks to Kelly Dhondt for her enthusiasm and comments:

caillaudii Kiener, 1845
Named after Frédéric Caillaud (1787-1869), French conchologist

cakobaui Moolenbeek, Röckel & Bouchet, 2008
Named after Seru Epenisa Cakobau, a Fijian chief and warlord

californicus Reeve, 1844
Named after California, in western North America

cancellatus Hwass, 1792
From the Latin, meaning "made like a lattice or grid"

cancellatus brunneobandatus Petuch, 1992
From the Latin, menaing "brownish banded"

cancellatus finkli Petuch, 1987
Named after Charles W. Finkl Jr. (b. 1941), American conchologist

cancellatus tristensis Petuch, 1987
Named after the Golfo Triste of Venezuela

canonicus Hwass, 1792
From the Latin, meaning "canonical" or "lawful", "regular"

canonicus condensus Sowerby, 1866
From the Latin, meaning "very dense", probably referring to the pattern of shells

capitanellus Fulton, 1938
From the Latin, meaning "little captain"

capitaneus Linnaeus, 1758
From the Latin, meaning "captain"

capitaneus ceciliae Crosse, 1858
From the Latin *Caecilia*, a Roman name derived from *caecus* (= blind)

capreolus Röckel, 1985
From the Latin , meaning "roe deer" (referring to "the colour, the elegance and delicacy of the shell")

caracteristicus Fischer, 1807
From the Greek charakteristikos, meaning "characteristic", "typical"

cardinalis Hwass, 1792
Referring to a cardinal, probably referring to the vivid red colour of the shell, an allusion to the red robes of members of the Sacred College in the Catholic religion

cardinalis donnae Petuch, 1998
Named after Donna Harland, photographer and former wife of Wayne Harland

cardinalis harasewychi Petuch, 1987
Named after M. G. Harasewych, research zoologist and curator of marine mollusks at the Department of Invertebrate Zoology at the Smithsonian Institution in Washington, D.C.

cargilei Coltro, 2004
Named after William (Bill) P. Cargile, American conchologist

carioca Petuch, 1986
Named for the Cariocas, people from Rio de Janeiro, as the species was first collected off Rio de Janeiro State, Brazil. From the Portuguese *carioca* (itself

from Kara'i oca, meaning “white man’s house" in the indigenous Amerindian language of the Tupi people), which refers to a native inhabitant of the city of Rio de Janeiro

catus Hwass, 1792
From the post-classic Latin, meaning “cat” (the classic word for “cat” is “*feles*”). The (classic) Latin “*catus*” also means “wise, intelligent, sagacious”

catus nigropunctatus Sowerby, 1857
From the Latin, meaning “black-dotted”

catus morrisoni Raybaudi, 1991
Named after Hugh Morrison, Australian conchologist and shell dealer

cedonulli Linnaeus, 1767
From the Latin, meaning “second to none”

cedonulli caledonicus Hwass, 1792
Named probably after New Caledonia (location error?), itself from the Latin Caledonia, the area corresponding to Scotland

cedonulli dominicanus Hwass, 1792
Named after the Dominican Republic

cedonulli insularis Gmelin, 1791
From the Latin, meaning “pertaining to an island”

centurio Born, 1778
From the Latin, meaning the commander of a century in the ancient Roman army

ceruttii Cargile, 1997
Named after Dave Cerutti, captain of the “*Gloriamaris*”, who brought up the first specimens from San Andrés Island

cervus Lamarck, 1822
Possibly from the Greek keravos, meaning “stag” or “deer”. “*Cervus*” also exists in Latin and it also means “deer”

chaldaeus Röding, 1798
The name refers to the Chaldean people (known as soothsayers and astrologers) from Babylonia, probably because the decoration of the shell is remindful of their alphabet

chiangi Azuma, 1972
Named after Chu-Shan Chiang, Japanese malacologist

chiapponorum Lorenz, 2004
Named after Marco and Pia Chiapponi, from Italy

ciderryi da Motta, 1985
Named after Cid Derry, an Australian shell dealer

cinereus Hwass, 1792
From the Latin, meaning “ash-coloured” (from *cinis* = ashes); *cinereus* = similar to ashes; *cineraceus* = ash-coloured

cinereus bernardii Kiener, 1845
Named after A. C. Bernardi (?-1863), French conchologist

cinereus gubba Kiener, 1845
Named after A. L. Gubba (?-c. 1850), a French shell collector

cingulatus Lamarck, 1810
From the Latin *cingulum*, meaning “a girdle that encircles the hips”, hence the “girdled” Cone

circumactus Iredale, 1929
From the Latin, meaning “turned round”

circumactus hammatus Bartsch & Rehder, 1943
Possibly from the Greek *hamma*, meaning “anything tied” or from the Latin *hamatus*, meaning “hooked”

circumcisus Born, 1778
From the Latin, meaning "circumcised"

circumcisus brazieri Sowerby, 1883
Named after John William Brazier (1842-1930), an Australian malacologist

clarus E. A. Smith, 1881
From the Latin, meaning "clear", "bright"

clenchi Martins, 1943
Named after William James Clench (1897-1984), American zoologist

clerii Reeve, 1844
Named after Commander Hanet-Cléry, French conchologist

cocceus Reeve, 1843
According to Reeve, the "scarlet-spotted" Cone. The Latin "*coccineus*" means "scarlet-coloured", "*coccum*" or "*coccus*" is a cochineal (insect), yielding a scarlet dye (cf. the French word for a ladybug/ladybird: une coccinelle)

coccineus Gmelin, 1791
From the Latin, meaning "dyed scarlet", "scarlet-coloured"

coelinae Crosse, 1858
Named after Céline (bio ?)

coelinae spiceri Bartsch & Rehder, 1943
Named after John I. Spicer, American malacologist

coffeae Gmelin, 1791
Probably from the English "coffee" (itself from the Italian caffè and the Turkish kahve), probably because the shape of the shell is remindful of a coffee grain

collisus Reeve, 1849
From the Latin, meaning "clashed" or "bruised"

collisus stigmaticus Reeve, 1849
From the Greek *stigma*, meaning "tattoo mark", hence "stigma-marked" Cone. The Latin "*stigma*" means "a mark burned in" (like they did with the slaves)

collisus straturatus Sowerby, 1865
From the Latin *stratura*, meaning "a paving" (hence the "paved" Cone)

colmani Röckel & Korn, 1990
Named after Phillip H. Colman (b. 1937), Australian malacologist

comatosa Pilsbry, 1904
From the Greek koma, meaning "coma" or "deep sleep" (?). The Latin "*coma*" and the Greek "*koma*"/"*komè*" both mean also "hair (of the head)" (*cf. C. auricomus*) . The Greek "*kooma*" (with o-mega, not with o-mikron) means "deep sleep". In an online dictionary I also find "*koomatoodès*", which means "lethargic"

comatosa schepmani Fulton, 1936
Named after Mattheus Marinus Schepman (1847-1919), Dutch zoologist

consors Sowerby, 1833
From the Latin consors, meaning "sharer", "having a common lot, of the same fortune"

consors anceps Adams, 1854
From the Latin, meaning "double-headed", "double-edged" or "divided into two parts"

consors daullei Crosse, 1858
Named after Daullé, a French shell collector

consors poehlianus Sowerby, 1887
Is there a link with the "*poehli*" that appears in, e.g. *Parasalenia poehli* (an echinoid) and *Riopa albofasciolatum poehli* (a lizard)? Has it something to do with Poehl, a pharmacist?

consors turschi da Motta, 1985
Named after Bernard M. Tursch, a Belgian malacologist

corallinus Kiener, 1845
From the Latin, meaning "coral-red"

cordigera Sowerby, 1866
Probably from the Latin cor (genitive: *cordis*), meaning "heart", and gerere, meaning "to carry", or "to wear", hence "wearing hearts"

cordigera bitleri da Motta, 1984
Named after Admiral W. S. (Skip) Bitler, American conchologist

coromandelicus Smith, 1894
Named after the Coast of Coromandel (southeastern coast of the Indian subcontinent)

coronatus Gmelin, 1791
From the Latin, meaning "crowned"

coronatus aristophanes Sowerby, 1857
From the Greek, *Aristophanes*, a male name (the name of an Athenean comic playwright who lived from 446 to 386 b.C.)

couderti Bernardi, 1850
Named after H. Coudert (?-1862), a French conchologist

crocatus Lamarck, 1810
From the Greek *krókos*, hence the Latin *crocus* meaning "saffron-coloured" (like the flower crocus)

crocatus magister Doiteau, 1981
From the Latin, meaning "chief" or "master"

crocatus thailandis da Motta, 1978
Named after Thailand

cumingii Reeve, 1848
Named after Hugh Cuming (1791-1865), English naturalist and collector

cuna Petuch, 1998
Named for the Cuna Indians of the San Blas Islands, Panama

curassaviensis Hwass, 1792
Named after Curaçao, an island in the southern Caribbean Sea

cuvieri Crosse, 1858
Named after Jean Léopold Nicolas Frédéric Cuvier (1769-1832), a French naturalist and palaeontogist

cyanostoma A.Adams, 1854
From the Greek *kyanos* (in Greek you pronounce it like kuanos), meaning "dark blue", and *stoma*, meaning "mouth", hence the "dark blue mouthed" Cone

cyanostoma coxeni Brazier, 1875
Named after Charles Coxen (1809-1876), an Australian (England born) naturalist

cylindraceus Broderip & Sowerby, 1830
From the Latin, meaning "vaguely cylinder-shaped"

dalli Stearns, 1873
Named after William Healey Dall (1845-1927), American zoologist

damasoi Cossignani, 2007
Named after Dâmaso Monteiro, Portuguese shell collector and dealer

dampierensis Filmer & Coomans, 1985
Named after the Dampier Archipelago (Western Australia), itself named after William Dampier (1651-1715), an English buccaneer

danilai Röckel & Korn, 1990
Named after Henrikas Danila, a Lithuanian conchologist

darkini Röckel, Korn & Richard, 1992
Named after Valeriy Borisovich Darkin, a Russian conchologist

daucus Hwass, 1792
From the Latin "*daucum*", referring to various plants, like parsnip and carrot. It probably referred to *Athamanta cretensis*. In the 2nd century AD the wild carrot was named "*Daucus pastinaca*" (adding the name *Daucus*).

daucus boui da Motta, 1988
Named after Patrice Bou, a French shell colector from Martinique

daucus goajira Petuch, 1992
Named after the Guajira Peninsula, north Colombia

daucus inconstans Smith, 1877
From the Latin, meaning "inconstant", "changeable"

daucus norai da Motta & Raybaudi, 1992
Named after António João Nora, Portuguese conchologist and shell dealer

daucus riosi Petuch, 1986
Named after Eliezer de Carvalho Rios, Brazilian zoologist

daucus vikingorum Petuch, 1993
Named after the Vikingos de Colombia shrimp company of Cartagena, Colombia, who allowed the author to go out and work on their shrimp boats for 3 years

dayriti Röckel & da Motta, 1983
Named after Fernando Dayrit (1921?-2007), a conchologist and shell dealer from the Philippines

delessertii Récluz, 1843
Named after Jules Paul Benjamin Delessert (1773–1847), a French naturalist

delucai Coltro, 2004
Named after André Cordeiro de Luca, a Brazilian conchologist

deprehendens Prelle, 2009
From the Latin deprehendere, meaning "to seize" or "to take by surprise", referring to the big surprise he had when he saw the first specimen

deynzerorum Petuch, 1995
Named after Albert E. Deynzer, American conchologist and shell dealer, and his wife Beverly A. Deynzer

diadema Sowerby, 1834
From the Latin, meaning "diadem" or "tiara"

dictator Melvill, 1898
From the Latin, meaning "a magistrate" or "one who dictates"

dieteri Moolenbeek, Zandbergen
Named after Dieter Röckel (b. 1922), German conchologist and Cone specialist & Bouchet, 2008

distans Hwass, 1792
From the Latin, meaning "distant" or "standing apart" (according to Reeve, the "distantly lineated" Cone)

dondani Kosuge, 1981
Named after Donald Dan, American conchologist

dorotheae Monnier & Limpaläer, 2010
Named after Dorothée Trencart, a diver in Senegal

dorreensis Péron, 1807
Named after Dorre Island, Western Australia

duffyi Petuch, 1992
Named after Glenn Duffy, shell dealer from the Dominican Republic

dusaveli H. Adams, 1872
Named after Du Savel, probably the French shell collector Eugène Barry Dusavel (1808-?)

Possible Range Extension

António Monteiro & José Rosado

Conus viola Cernohorsky, 1977 is a well known species found from the Philippines to Melanesia (Papua New Guinea, Solomon Islands) and West Thailand, according to Röckel et al.

Quite recently, however, the second author found a curious specimen in the Moçambique coast. This specimen is 40.3 mm long and was dredged at a depth of 100 to 105 metres, N. E. of Inhaca Island (South Moçambique, at the entrance of Maputo Bay), about 15 miles from the Lighthouse.

There seems to be little doubt that it is in fact a *C. viola* Cernohorsky, in which case its finding represents a considerable extension of the previously known geographic range for the species. It is a pity that the specimen is badly damaged, as can be seen in the photo. Even so, a remarkable find.

Conus hopwoodi in Australia

Jon F. Singleton

The old *Conus gracilis* Sowerby III, 1875 name was invalid, so was renamed as *Conus hopwoodi* Tomlin, 1936. There is a holotype within the NMWC size 30.5 × 10 mm, but no type locality was stated. The known range today is the mid and southern Western Pacific, with a few specimens also reported from the north-eastern Indian Ocean.

C. hopwoodi is also known from Australia, being found around several off-shore reefs along the northern half of the Queensland coast, and also within the eastern Gulf of Carpentaria. Most are trawled dead, but a few live specimens are known. These are not so strikingly marked as the Philippine specimens which can be variable in pattern, but all I have seen possess two very pale brown bands on an off-white base colour. I have seen a score of specimens, so likely this cone is reasonably common in Queensland waters, though rarely collected.

1. 31mm x 11mm Percy Is., 40m.
2. 32mm x 10mm Keeper Rf., 60m.
3. 33mm x 10mm Gould Rf., 50m.

Conus nucleus in Australia

Jon F. Singleton

Conus nucleus Reeve, 1848 is known from two syntypes held within the BMNH, the largest being 21.6 × 9.9 mm, and has a type locality of Matnog Is., Luzon, Philippines. The range is extensive, from Madagascar to the Western Pacific, but with a few surprising gaps in between.

Within the old Walls *Cone Shells* book, this species is correctly identified, but placed with *C. luteus* on page 425, which shows three separate species.

C. nucleus is a little gem of a cone, varying from a light tan in colour, to pink or orange, with all having a thin central band of white markings, and smooth with a high gloss. From all I have sighted, there is no variation in shape.

Conus nucleus

Lengths - 18mm to 26.5mm

1. Indonesia 2. Comoros Ils.
3. W. Australia 4. W. Australia
5. Vanuatu 6. Philippines
7. Japan.

The Cone from Dampier

Jon F. Singleton

I was fortunate in finding two nice specimens from an off-shore reef in the N. W. of Western Australia in the mid 1980s, both on night dives in clean sand at a depth of 20 metres. A few years later I found an extra large specimen off the S. W. Bali coast, Indonesia. Over the years I have managed to obtain others from various locations, but have not sighted any from Madagascar.

The illustrated specimens range in length from 16.8 to 26.6 mm.

References

1979. Walls. *Cone Shells. A Synopsys of the Living Cones*

1995. Röckel, Korn & Kohn. *Manual of the Living Conidae*

A small cone with a limited range between Onslow and Port Hedland on the northwest coast was well known to the early collectors living in the region. Over the years it had been marketed under several differing names, with *C. tegulatus* being the most common in usage. Eventually it was to be described and named *Conus dampierensis* Filmer & Coomans, 1985.

When I resided in the region I came across this cone at many locations, and Rosemary Island off Dampier was where the species was most common. Since retiring to Geraldton in 1992, I have made annual trips back to my old shelling haunts, and noticed this species seemed to be in decline, and become missing at several of once productive locations. I do not think over-collecting is the cause; most likely increased cyclonic activity decimated many of the old hot-spots.

The standard colour and pattern is a medium brown on white, but there is also an all-white form, and sometimes a faint yellow tint mid-body. Large adult patternless specimens are rare, though small sub-adults do occur in several populations. The fig. 4 specimen is an example, and this is also a good match for the *Conus albospira* E. A. Smith, 1880, of which an illustration can be seen in the *Cone Manual* on Pl. 70, figs. 21 & 22. Possibly this may be a prior name for *C. dampierensis*, but fortunately the current edition of the ICZN bible now makes it near impossible to promote old names in order to stabilize the nomenclature.

References

1985. Filmer & Coomans. *Beaufortia* 35(1), description of *C. dampierensis*.

1995. Röckel, Korn & Kohn. *Manual of the Living Conidae*

Exceptional Specimens

Philippe Quiquandon

Conus aulicus Linnaeus, 1758
112.6 mm
Palawan Island, Philippines

Conus tribblei queenslandis da Motta, 1984
140.4 mm
Queensland, Australia

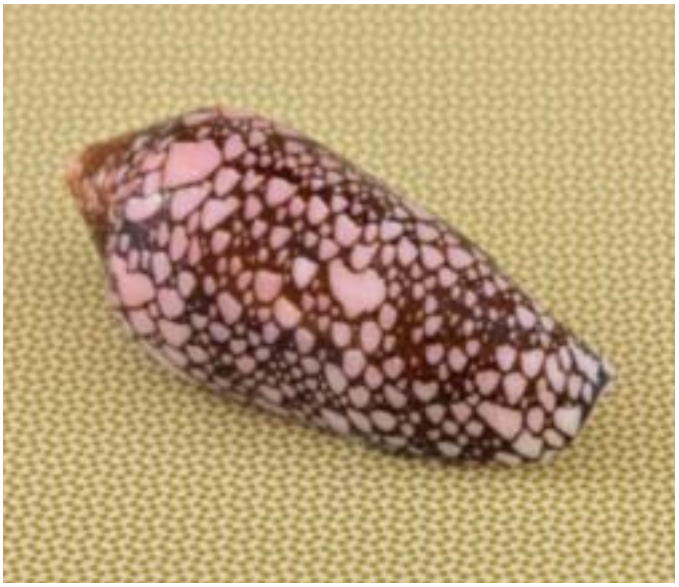
Cones From the Great Barrier Reef

Remy Devorsine

During our annual field trip to the Great Barrier Reef with the Brisbane shell club, I found this beautiful *Conus magnificus* Reeve, 1843. This specimen was found at Twin cays reef, part of the Swain Reef group.

Other cones also found during the same trip included *C. tessulatus* Born, 1778, *C. bandanus* Hwass, 1792, *C. episcopatus* da Motta, 1982, *C. ferrugineus* Hwass, 1792, *C. catus* Hwass, 1792, *C. nigropunctatus* Sowerby, 1857, *C. mitratus* Hwass, 1792, *C. musicus* Hwass, 1792 and *C. glans* Hwass, 1792.

Interestingly, according to one of us who has been shelling on the GBR for many years, *C. marmoreus* Linnaeus, 1758 in apparently not present on the GBR only *C. bandanus* is found there…..I must tell that personally I have found *C. bandanus* only on the GBR….not a single *C. marmoreus*... something to be verified. *C. marmoreus* is present on coastal reefs in Queensland.



Australian *textile*

Thierry Vulliet

I would like to show some special specimens of *Conus textile* Linnaeus, 1758 found here on the Gold Coast, Queensland, Australia. I find that they look difference from the one of the Great Barrier Reef: they are longer and browner, and the pattern is also different, although, of course, *C. textile* is well known for its variability…

I found these specimens by day and night, 6 metres deep under rooks on muddy sand.

Specimen 1 (54 mm), 2 (55.1 mm), 3 (60.1 mm), 4 (60.9 mm), 5 (64.1 mm)

New Publications / New Taxa

António Monteiro

Recent publications of interest to Cone collectors and researchers include the following:

1) R. M. (Mike) Filmer, *Taxonomic Review of the Conus spectrum, Conus stramineus and Conus collisus Complexes* (*Gastropoda – Conidae*) – Part I
Visaya, Vol. 3, No. 2, July 2011 (p. 23-56, pl. 1-29)

This first part of a three-part article deals with the *Conus spectrum* group. The author explains that he uses "complex" in the sense of "closely related groups of taxa". The following taxa are tackled in the text: *C. spectrum* Linnaeus, 1758, *C. chinensis* Röding, 1798, *C. carota* Röding, 1798, *C. felines* Link, 1807, *C. inflates* Sowerby I & II, 1833, *C. conspersus* Reeve, 1844, *C. verreauxii* Kiener, 1845, *C. stillatus* Reeve, 1849, *C. filamentosus* Reeve, 1849, *C. lacteus* Lamarck, 1810 (non Röding, 1798) – renamed in this paper as *C. purissimus* n. nom. –, *C. daphne* Boivin, 1864, *C. broderipii* Reeve, 1844, *C. pica* A. Adams & Reeve, 1848, *C. dolium* Boivin, 1864, *C. petergabrieli* Lorenz, 2007 and *C. zandbergeni* Filmer & Moolenbeek, 2010. Also, one type locality is designated and two type localities are corrected.

2) William P. Cargile, Description of *Conus antoni*, a new subspecies from south Florida. *The Journal of American Conidae – Western Atlantic, Caribbean and Panamic Provinces*, Vol. 1, No. 1, august 2011 (p. 1-16, 27 figs.)

In this paper the following subspecies is described:

Conus anabathrum antoni n. ssp.

Type locality: Dry Tortugas, Florida
Holotype: 31.6 x 14.5 x 25.0 mm (Santa Barbara Museum of Natural History)

Etymology: Named for Dr. Anton Olienik, a Cone collector

3) Edward J. Petuch & Dennis M. Sargent, *New Species of Conidae and Conilithidae (Gastropoda) from the Tropical Americas and Philippines*. With Notes on Some Poorly-known Floridian Species. *Visaya*, Vol. 3, No. 3, August 2011 (p. 37-50, pl. 1-8)

The following new taxa are described:

a) *Virgiconus tethys* n. sp.

Type locality: Sulu Archipelago, Philippines
Holotype: 85.3 x 45.4 mm (Los Angeles County Museum of Natural History)

Etymology: Named for the Sea Titaness, Tethys, daughter of Uranus and consort of Oceanus

b) *Calamiconus jeffreyi* n. sp.

Type locality: Balabac Island, Philippines
Holotype: 79.3 x 44.5 mm (Los Angeles County Museum of Natural History)

Etymology: Named for Captain Douglas Jeffrey, Philippine shell collector

c) *Dauciconus fenzani* n. sp.

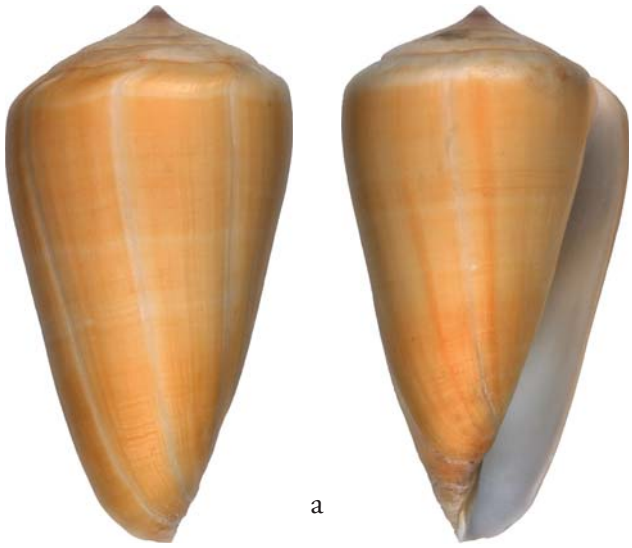
Type locality: Golfo de Chiriqui, Panama
Holotype: 47.1 x 21.8 mm (Los Angeles County Museum of Natural History)

Etymology: Named for William (Bill) J. Fenzan, a well-known Cone collector

d) *Purpuriconus belizeanus* n. sp.

Type locality: Belizean Atolls, Belize
Holotype: 15.56 x 9.2 mm (Los Angeles County Museum of Natural History)

Etymology: Named for Belize)



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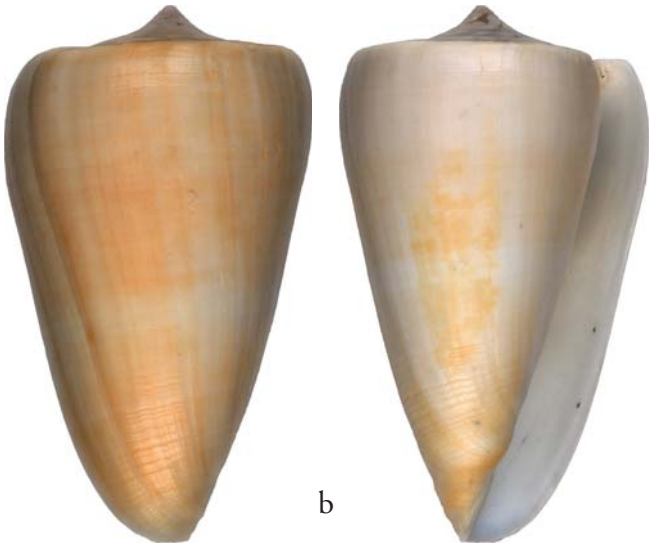

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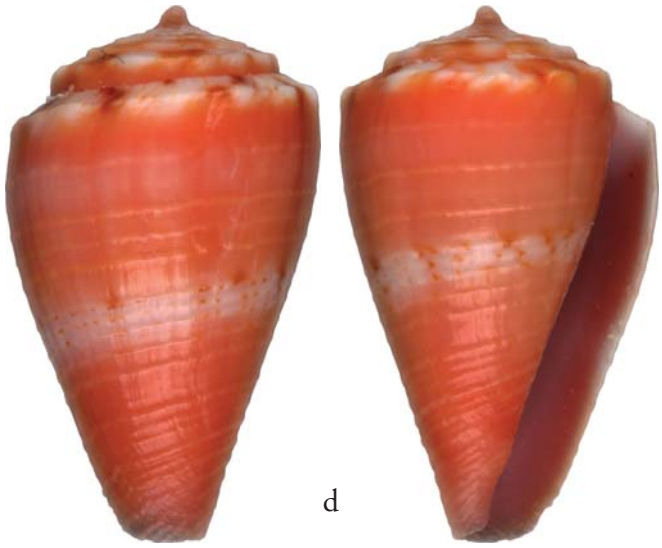

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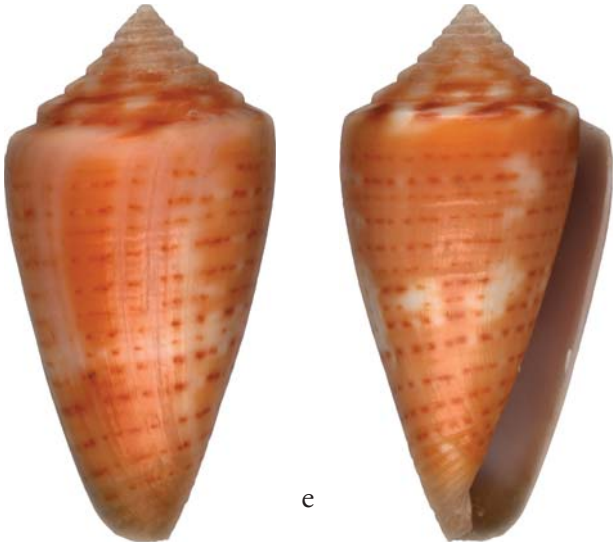

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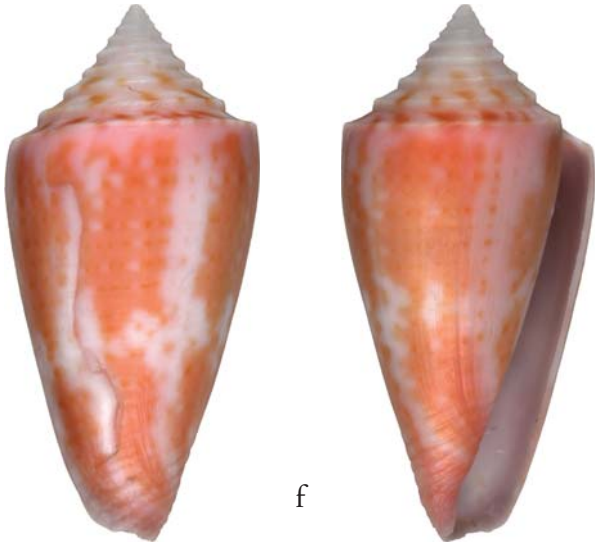

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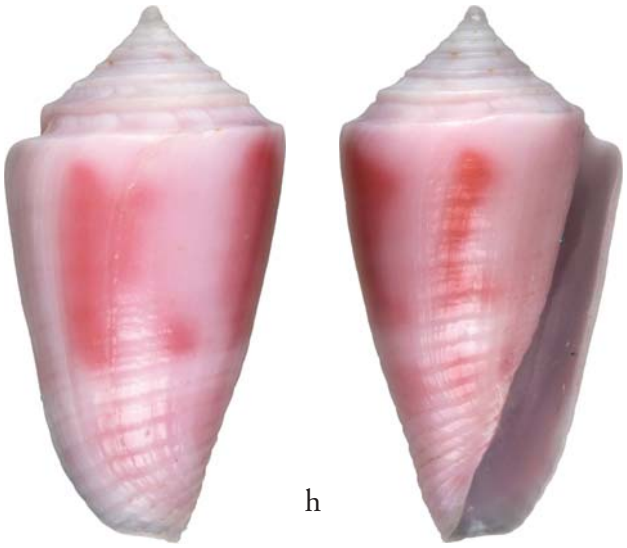

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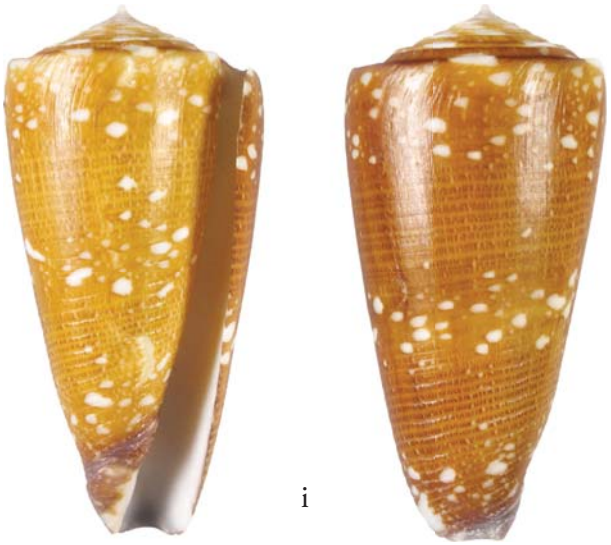


i

e) *Gradiconus maya* n. sp.

Type locality: Quintana Roo State, Yucatan Peninsula, Mexico
Holotype: 27.9 x 13.9 mm (Los Angeles County Museum of Natural History)

Etymology: Named for the Mayan Indians of the Yucatan Peninsula and Mayapan

f) *Gradiconus tortuganus* n. sp.

Type locality: Dry Tortugas, Florida
Holotype: 27.9 x 13.9 mm (Los Angeles County Museum of Natural History)

Etymology: Named for Dry Tortugas

The authors inform that *G. tortuganus* n. sp. was previously described by W. P. Cargile as *C. antoni* (see above). Moreover, they are of the opinion that both names are synonyms of *G. anabathrum tranthami* (Petuch, 1995).

g) *Jaspidicionus roatanensis* n. sp.

Type locality: Roatan Island, Honduras
Holotype: 13.9 x 7.7 mm (Los Angeles County Museum of Natural History)

Etymology: Named for Roatan Island, Honduras

h) *Jaspidiconus fluviamaris* n. sp.

Type locality: Pompano Beach, Florida
Holotype: 16.2 x 8.5 mm (Los Angeles County Museum of Natural History)

Etymology: From the Latin *fluviamaris* meaning "sea river", in reference to the Gulf Stream Current that flows over the range of the new species

Moreover, the article includes notes on the following Floridian and Bahamian species: *Lindaconus lindae* (Petuch, 1987), *Jaspidiconus pfluegeri* Petuch, 2004, *J. vanhyningi* (Rehder, 1944) and *J. pealii* (Green, 1840).

I thank the authors for supplying photos of the holotypes (see Plate).

4) Guido T. Poppe & Sheila Tagaro, A New subspecies of *Conus nobilis* Linnaeus, 1758 from Solor Island, Indonesia
Visaya, Vol. 3, No. 3, August 2011 (p. 83-87, pl. 1-3)

In this paper the following subspecies is described:

i) *Conus nobilis abbai* n. ssp.

Type locality: Solor Island, Indonesia
Holotype: 34.5 x 16.4 mm (Koninklijk Instituut voor Natuurwetenschappen, Brussels)

Etymology: Named for John Abba, well-known shell collector

I thank the authors for supplying photos of the holotype.

5) P. Bouchet, Yu. I. Kantor, A. Sysoev & N. Puillandre, A New Operational Classification of the *Conoidea* (*Gastropoda*). *Journal of Molluscan Studies*, Vol. 77, No. 3, November 2011 (p.273-308)

From the Abstract:
A new genus-level classification of the *Conoidea* is presented, based on the molecular phylogeny of Puillandre et al. in the accompanying paper. Fifteen lineages are recognized and ranked as families to facilitate continuity in the treatment of the names *Conidae* (for 'cones') and *Terebridae* in their traditional usage. The hitherto polyphyletic 'Turridae' is now resolved as 13 monophyletic families, in which the 358 currently recognized genera and subgenera are placed, or tentatively allocated. A diagnosis with description of the shell and radulae is provided for each of these families.

6) *Rossiniana*

Not exactly "new taxa" stuff, but it is interesting to see that the 62 issues of the well known New Caledonian magazine *Rossiniana*, published by the Association Conchyliologique de Nouvelle Calédonie from 1978 to 1995 are currently available on line and can be downloaded for free from *http://marmoreus.free.fr*

With a print run of only 500, printed copies are not easy to find. On its pages there are many interesting articles on Cones (such as José Lauer's series of 18 articles on the "textile complex" or the discovery of *Conus lamberti*). The magazine is bilingual (French and English) and from 1986 on included many colour photos.

Thanks to Jean-Pierre Amigo for this information.

CONODAYS – Zermatt, Switzerland, 7-9 December 2011

Manuel J. Tenorio

Between 7 and 9 December 2011 took place in the beautiful mountain town of Zermatt, in the Swiss Alps – just at the foot of the majestic Matterhorn – the international congress named CONODAYS (for more information, please check *www.np2d.com*). This was a satellite event of the major congress "Natural Peptides to Drugs", and its purpose was to celebrate the CONCO project – the cone snail genome project for health.

The CONCO project has been a major research project, co-funded by the European Commission and other sources, which gathered 20 partners from different institutions and companies all over Europe and USA. The international project was coordinated by Dr. Reto Stöcklin, from Atheris Laboratories, Geneva, Switzerland and involved people from more than 14 different countries. The ultimate goal of this initiative has been the use of "applied venomics of the cone snail species *Conus consors* for the accelerated cheaper, safer, and more ethical production of innovative biomedical drugs".

Those who attended the 1st International Cone Meeting held in Stuttgart in October 2010 should be familiar with this project, since one of the speakers in that meeting, Prof. Dietrich Mebs from the Toxinomics Foundation (one of the CONCO partners), presented a general outline of this initiative to the audience. The CONCO project has aimed at characterising from the genome, transcriptome and proteome of *Pionoconus consors*, the potential therapeutic properties of all putative bioactive compounds present in the venom generated by this fish-eating species.

Already one lead compound identified from this venom, a substance known as XEP-018, has been submitted to patent application along with proofs of its valuable therapeutic properties.

The CONCO project has been running for a period of 5 years from February 2007, so it is coming to an end in January 2012. During this time, all partners of the project have been meeting on a regular basis in order to discuss progress and coordinate the research efforts, and the CONODAYS meeting was intended to celebrate the end of the CONCO project. At variance with the other internal meetings previously held, this one was open to the public and several important invited opening and keynote lectures from researchers external to the CONCO project were included in the densely packed scientific program.

The meeting took place in the prestigious Mount Cervin Palace Hotel. It was snowing for more than two days during the celebration of the event, so the town and the winter landscape looked incredibly beautiful. CONODAYS opened up immediately after the closing of the Natural Peptides to Drugs international Congress.

The opening lecture was by Prof. Baldomero Olivera (Univ. of Utah, USA), who talked about "*Conus* venom peptides: retrospective insights and prospective possibilities", followed by Dr. George Miljanich (Airmid Inc., CA, USA), vice-president of the Toxinomics foundation and a person who played a key role in the clinical development and commercialization of PRIALT® (Ziconotide). Dr. Miljanich presented a most interesting lecture titled "Peptides from cone snail venoms as a rich source of new medicines – lessons learned in the development of these potential drugs".

After these two talks, there was an opportunity for remembering the late Prof. André Ménez, one of the fathers of the CONCO project, and its driving force. Several memorial presents were handed over to speakers and to Renée Ménez. Among them, one

remarkable item: a novel species of cone snail: "*Conus chocolatus*". This was a recreation of a large cone shell (possibly a *Kalloconus pulcher* was used as model) in Swiss chocolate, designed by Xavier Sprungli, the graphic designer of the Toxinomics Foundation, and was one of the stars in the event. Being in Switzerland of course meant that there were other opportunities for the audience to taste chocolates! For instance, a contest was organized at the end of the session in which the flavours of different chocolates were to be guessed by tasting, accompanied by wine.

After the opening lectures, a large number of invited keynotes, CONCO keynotes and short hot-spots were presented during the running of CONODAYS. All of them were extremely interesting, but perhaps too specialised for an average Cone collector – lots of Biochemistry! Mass spectrometry, nuclear magnetic resonance, chromatography and other concepts may sound weird to a general audience… In the circumstance, this was not the case, since most if not all of the people present were professional scientists from different fields.

Among the many top-level presentations, I would underline several that were possibly the most appealing to general collectors, such as the ones by Prof. Frank Marí (Florida State University, USA): "Adventures with cone snails from the Americas: Seeking the discovery of conotoxin structures and their functional implications"; Prof. Gisela Concepcion (Univ. of the Philippines, Philippines): "Turrid and Crassispirid peptides and genes superfamilies: Extending the snail venom neuropharmacology resource"; Prof. David Craik (Univ. Queensland, Australia): "ConoServer: An annotated database and discovery tool for conopeptides"; Prof. Dietrich Mebs (Univ. Frankfurt, Germany): "Venomics-understanding the venomous function"; Dr. Reto Stöcklin (Atheris Laboratories, Switzerland): "CONCO-the cone snail genome for health", and Dr. Nicolas Puillandre (Atheris Laboratories & MNHN-Paris): "Biodiversity and evolution of *Conoidea*". I also presented a short (5 minutes) hot-spot talk titled "Cone radular anatomy as a proxy for phylogeny and for conotoxin diversity".

On Thursday evening, an excellent buffet dinner was served at the Petit Cervin Hotel, which effectively contributed to warm up the atmosphere and increase the interaction among attendees. The meeting ended around noon on Friday December 9th, with two most interesting presentations to close it, one focused on Biotech patenting in Europe, emphasis on biologics, and the other on EU-Framework programmes: Opportunities & treats.

Once the meeting was over, I still had the time to rent skis and enjoy of the wonderful ski slopes of Gornergrat and its breathtaking views of the Matterhorn, Monte Rosa and the rest of the Valaisian Alps, in a sunny afternoon that will be long-remembered.

Summing up, the CONODAYS meeting, held in the unrivalled setting of the Swiss Alps, was a great success. The 90 attendees from almost 20 different countries scientifically and socially enjoyed the event, which covered all aspects of the state-of-the-art of research and development on conotoxins. Dr. Reto Stöcklin, Stelle Bianchi and Dr. Philippe Favreau, members of the scientific steering committee, as well as all the other members of the organising team are to be commended for their efforts which led to such a success.

Dr. Reto Stöcklin is one of the invited speakers in the Second International Cone Meeting, to be held in La Rochelle (France) in September 2012. I am sure that many of us will be delighted to hear what he has to tell about past and future directions on conotoxin research.

We shall be there.

The Matterhorn, above the snow-topped roofs of Zermatt

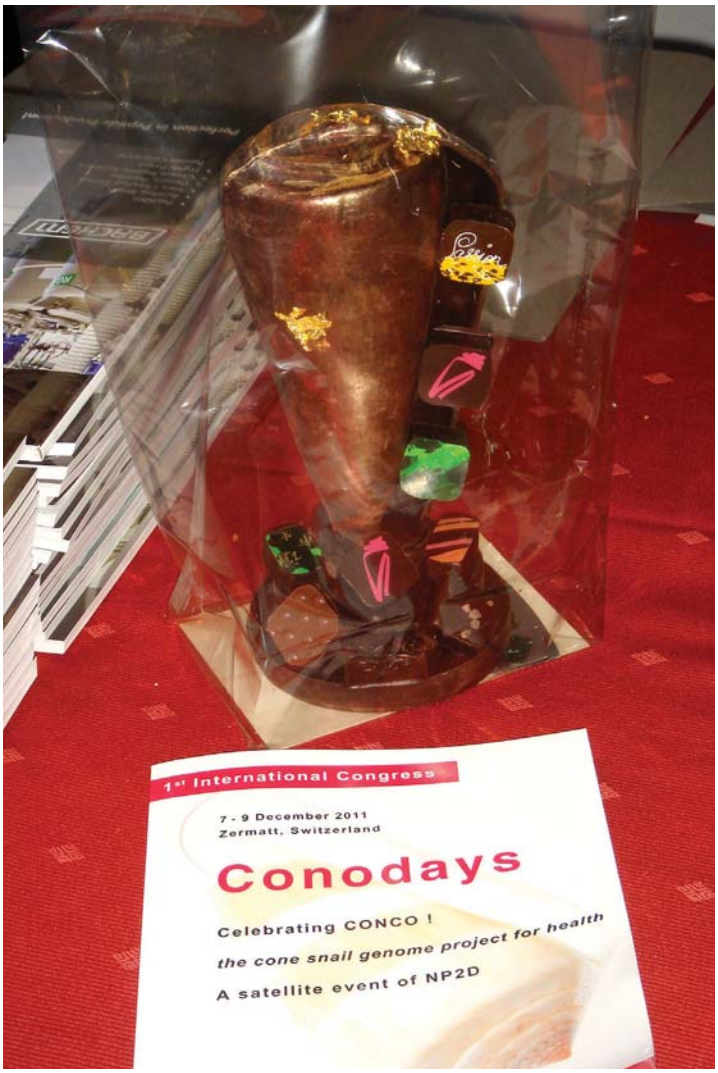
A view of the main street in Zermatt during the celebration of CONODAYS

The Mount Cervin Palace Hotel, venue of CONODAYS

A view of part of the conference hall

Toto Olivera's evocation of Prof. André Menez

Dr. George Miljanich disserting about Ziconotide

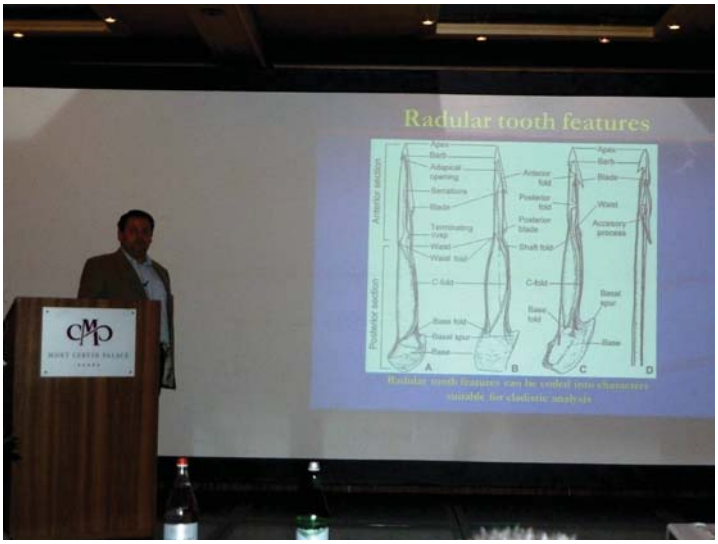


The most special specimen in CONODAYS:
"*Conus chocolatus*"

With Dr Frank Marí during a coffee break

Dr. Reto Stöcklin, coordinator of the CONCO project, during his presentation

Dr. Nicolas Puillandre presenting his talk on molecular phylogeny of cones



A moment of my presentation on radular morphology
Raymond Norton (Australia) at the background

A nice photo, from right to left:
Dr. Eric Monnier, Prof. Toto Olivera and myself

A view of the Valaisian Alps from Gornergrat, from right to left:
the Weisshorn (4505 m), Schalihorn (3.974 m), and Zinalrothorn (4.221 m)

Cone Snail Risk Assessment Workshop Chicago, October 2011

Manuel J. Tenorio

During the last week of October the Biodiversity Synthesis Center at the Field Museum, Chicago hosted a workshop for IUCN (acronym for International Union for the Conservation of Nature) Red List of Threatened Species (*www.iucn.org*) on behalf of the Environment Dept. at the University of York, UK (*www.york.ac.uk/environment*). The purpose of the meeting was to assess threats to over 640 species of cone snails, one of the largest assessments undertaken for this purpose at a single session. The organisation of this forum was under the leadership of Howard Peters and Professor Callum Roberts of the University of York, with funding and logistical support provided by the Encyclopedia of Life (EOL) based at the Field Museum (*http://eol.org*) and with additional funding and technical support provided by the Global Marine Species Assessment (GMSA) at Old Dominion University, Norfolk, Virginia (*http://sci.odu.edu/gmsa*).

For the last 12 months the organizers have been working on a list of Cones including comprehensive information for each species taken from published literature including: taxonomy (with assistance from Mike Filmer), distribution, occurrence, populations, habitats and ecology, use and trade including scarcity and market values, known threats, conservation, etc...

Using this data, a preliminary risk assessment for each species was completed. For those who are unfamiliar with what this risk assessment means, it culminates in placing every individual species into one of the following categories according to clearly defined IUCN criteria: "Least Concern", "Near Threatened", "Vulnerable", “Endangered”, “Critically Endangered” “Extinct in the Wild” or “Extinct”. There is an additional category of “Data Deficient”, which applies when insufficient data are available for assessing the risk status of a given species.

The fact that a species is classified under these categories means that its status has been evaluated at a certain moment, but does not necessary imply that such species is at risk (i.e., it may be “Least Concern”). Of course, the assessment has to be revised on a periodic basis in order to keep all records updated and to identify changes in status possibly caused by population declines.

A number of cone specialists from all over the world, with emphasis on expertise in certain geographical areas, were invited to join this meeting. The invited Cone specialists were: Prof. Philippe Bouchet (MNHN, Paris, France), José Coltro (Femorale, Brazil), Dr. Tom F. Duda (University of Michigan, USA), Prof. Alan J. Kohn (University of Washington, USA), Dr. Eric Monnier (CNAM, Paris, France), Hugh Morrison (Australian Seashells, Australia), Dr. Ed Petuch (Florida Atlantic University, USA), Guido Poppe (Conchology Inc, Philippines), Dr. Gabriella Raybaudi-Massilia (University of Roma Tre, Italy), Sheila Tagaro (Conchology Inc., Philippines), Dr. Manuel Jiménez-Tenorio (Universidad de Cádiz, Spain), Stephan Veldsman (Gem Science, South Africa), and Dr. Fred E. Wells, (Consultant Marine Ecologist, Australia).

Apart from the cone specialist group and the organisers, there were a number of ‘facilitators’ who acted as moderators and helped with the assessment process. All of them were very kind and professional, and deserve congratulations: Dr. Monika Böhm (Institute of Zoology at the Zoological Society of London, UK), Dr. Heather Harwell, Andrew Hines and Jonnell Sanciangco (all Global Marine Species Assessment, USA), Dr. Suzanne Livingstone (The Biodiversity Consultancy Ltd, France), and Dr. Mary Seddon (IUCN Mollusc Specialist Group, UK). From this listing, it can be appreciated that the organisers made a wise choice in assembling together a team of specialists from different areas, including academia as well as shell dealers and other professionals.

The Field Museum of Natural History in Chicago was the venue for this meeting; an impressive and beautiful building with lots of treasures to be admired. The largest, most complete, best preserved skeleton of a

specimen of Tyrannosaurus rex is one of the stars of the museum and it is proudly exhibited in the main hall. It is known as “Sue”, in honour of its discoverer, the palaeontologist and adventurer Susan Hendrickson. The building of the museum is situated at the southern part of what is called "The Magnificent Mile", a stretch of road along the shore of Lake Michigan.

The workshop opened with an address by Prof. Callum Roberts of the University of York, one of the organisers, describing the challenges facing marine science as the impact of over-exploitation, habitat loss, rising sea levels and changes in the marine carbon cycle bring global fisheries to collapse and threaten the future existence of aragonite-secreting animals such as corals and molluscs.

Dr. Mark Westneat of the Encyclopedia of Life (EOL) and Dr. Heather Harwell, of the Global Marine Species Assessment (GMSA), joint sponsors of the meeting, presented the work of their respective organizations. This was followed by a presentation from Howard Peters, principal researcher for the Cone Snail Project at the University of York, on the background to the research and its future direction that will include sample surveys of Cone populations across variations in habitat quality.

Dr. Monika Böhm of the Institute of Zoology at the Zoological Society of London and Dr. Mary Seddon of the IUCN Mollusc Specialist Group concluded the formal proceedings with presentations on the application of the standard IUCN Categories and Criteria and the taxonomic approaches to Red Listing. In this sense, it must be stated that the primary goal of this workshop was not to establish any particular taxonomic status for given species or groups of species. The source for preparing the listing of species for assessment was the available published literature with the support of taxonomists. Of course, there were particular cases in which the validity of certain species considered was dubious, whereas others, in particular some of the recently-described species had been excluded. With limited time available, we specialists were asked not to over-complicate the assessment where such issues were too contentious for rapid resolution, but restrict ourselves to making corrections wherever needed. Cone snails were treated as a whole without entering into supraspecific taxonomy issues except to note them for future resolution outside the workshop.

The first working day ended with a common exercise in which two species of cones were assessed in order to show the attendees how the procedure works, answer questions, and in essence to show clearly what was expected from us in the subsequent days. In order to accomplish the task, the meeting divided into six work groups each representing a different biogeographical region to review draft species assessments researched at York over the previous months. Each group consisted of two or three experts for that region, with representation from both academia and commerce, including leading malacologists and taxonomists but also major global traders in mollusc shells who are committed to conservation.

Of course, there were plenty of opportunities for these groups to interact with each other, and questions were frequently asked and answered. In addition to the specialists, each group was under the guidance of a ‘facilitator’ working for the organisers, acting as moderator. The facilitators entered all information provided by us experts into the IUCN Red List on-line database: Species Information Service (SIS), and ensured that all working groups could achieve their task in a uniform way. The modifications on the database were displayed on a large screen. This activity went on from the morning to the evening, each ‘working cell’ handling between 20 and 40 species a day. The complete exercise took 5 days, but the goal was ultimately achieved.

We also got informative speeches during our stay. Prof. Philippe Bouchet gave a very interesting talk on the

results of his expeditions. He had developed a method to calculate the number of species in a given group over a specified area, based on former field experience. This number contains both the described species and the species yet to be discovered. Hence, biodiversity in tropical seas seems to have been much underestimated to date, and many exciting discoveries are to be expected in the future.

In spite of the lengthy but most interesting working sessions, the meeting allowed for some recreational activities. Dr. Rüdiger Bieler and Dr. Jochen Gerber, curators of the mollusc collections at the Field Museum, were perfect in their roles. They showed us the extensive collections "behind doors". The Field Museum also houses the Alan J. Kohn wet and dry Cone snail collections, and it is also particularly strong in land and freshwater shell collections. On another evening, Dr. Bieler and his wife, Dr. Petra Sierwald, invited us to attend a little get-together at their home, which served much to "connect with old and new malacological friends over a beverage or two". The evening was very enjoyable to all of us lucky enough to attend, and we all were very grateful for their kind hospitality. The workshop ended with a dinner at the Nepali restaurant Chicago Curry House, which was a much celebrated social event.

As the meeting ended participants dispersed and went their own way. The goal of assessing the risk status of more than 600 species of worldwide cone snails had been achieved.

The results? The work is not over yet. It will take time to review all the species to ensure consistency in the presentation of the results, checking citations and bibliography and generally ensuring that there are no typographical errors in the text. On completion, the data will be verified by the Mollusc Specialist Group of the IUCN acting in a peer-review capacity. They will then be returned to Howard Peters in York for any further corrections before final submission to the Red List Unit. It then has to take its place in the queue before it is scrutinised for publication on the internet sites of IUCN Red List of Threatened Species and the Encyclopedia of Life. The whole process takes many months and is explained more fully on the IUCN Red List website (*http://www.iucnredlist.org/news/iucn-red-list-site-made-easy-guide*).

The forum was critical for collectors as it concerns the future of Cone collecting. We are in the front seats when viability of Cone snails in nature is the subject: it assures also the long-term viability of our passion. I am pretty sure that at this moment, all readers will be looking forward to knowing the outcome of the assessment for certain species or geographical areas in particular. We cannot disclose any of the results since the process is not yet complete. We can only say that, as expected, few of the Cones in the Indo-Pacific fail to reach the 'Least Concern' category, since many of them have extensive ranges and may have also large bathymetric ranges. The situation is slightly different in the Atlantic where shallow water local populations live and thrive, occasionally in vulnerable habitats. If you want to be among the first to know the initial results of this assessment, you are lucky: Howard Peters is going to be one of the speakers in the second International Cone Meeting to be held in La Rochelle next September. He will present to the audience his research on Cones including an insight into the results of the global assessment. Certainly, another good reason to attend the meeting!

I would like to finish this article thanking once more the organisers of this workshop, the facilitators as well as the sponsoring organisations, EOL and GMSA. All of them did a more than excellent job, and they deserve congratulations and our most sincere appreciation.

Chicago skyline and Lake Michigan shore from the museum main entrance

The Field Museum, Chicago

From left to right: Tom Duda and Sheila Tagaro (back row), Heather Harwell, Alan Kohn and Guido Poppe

From left to right: Stephan Veldsman, Monika Böhm and Gabriella Raybaudi-Massilia

Philippe Bouchet and Hugh Morrison

Work session, from right to left: Philippe Bouchet, Hugh Morrison, Fred Wells, Andrew Hines (occult), Ed Petuch, José Coltro, Heather Harwell, Suzanne Livingstone and Sheila Tagaro

From left to right: Ed Petuch, Alan Kohn, Manuel Jiménez Tenorio and Eric Monnier

Tom Duda, Alan Kohn and Manuel Jiménez Tenorio

Alan Kohn and Sheila Tagaro examining specimens. On the left, Rudiger Bieler, from the Field Museum staff

Going through the collections

Everybody happy at dinner time

From left to right: Mary Seddon, Callum Roberts, Howard Peters, Jonnell Sanciangco, Philippe Poppe, Sheila Tagaro, Gabriella Raybaudi-Massilia

Standing (left to right):
1. Hugh Morrison
2. Gabriella Raybaudi-Massilia
3. Callum Roberts
4. Philippe Bouchet
5. Tom Duda
6. José Coltro
7. Monila Böhm
8. Suzanne Livingstone
9. Mary Seddon
10. Stephan Veldsman
11. Jonnell Sanciangco
12. Eric Monnier
13. Sheila Tagaro
14. Guido Poppe

Kneeling (left to right):
1. Howard Peters
2. Heather Harwell
3. Andrew Hines
4. Manuel Jiménez Tenorio
5. Ed Petuch
6. Fred Wells
7. Alan Kohn

Standing on the back:
Sue, the famous
Tyrannosaurus rex Osborn, 1905

2nd International Cone Meeting
28-30 September, 2012 - LA ROCHELLE

António Monteiro

Work on the 2nd International Cone Meeting, to be held next year at La Rochelle, France, is progressing, as expected.

Manuel Jimenez Tenorio in particular, has been quite busy inviting speakers and putting together the program for the entire weekend.

So far, the following speakers – in alphabetical order – have been confirmed (the titles of their talks will be announced in due time):

Philippe Bouchet
Howard Peters
Ed Petuch
André Poremski
Michael Rabiller
Gabriella Raybaudi
Georges Richard
Reto Stöcklin

It is clear to see from this listing that we may expect to meet the very high standards we aim at in our upcoming event.

As you can see above, we also have a brand new logotype that has been designed by the staff from the La Rochelle Museum, along the lines of the logo we had for our first meeting in Stuttgart. We are of course quite happy and proud of this visual updating.

Muséum
LA ROCHELLE

For La Rochelle, we are planning a number of different activities, such as the presentation of posters and the organization of workshops. About the latter, I may perhaps be a little indiscreet and tell that Manuel J. Tenorio has agreed to do one on radular teeth extraction

2nd International
CONE MEETING
28 - 30 sept. 2012 - LA ROCHELLE

and microscopical observation; we are also planning a workshop on juvenile Cones and contacts are being made to invite someone to organize it.

Seashell dealers will also be invited – some have already confirmed their presence – for a mini-bourse dedicated entirely to Cones. There will be many chances to acquire outstanding specimens and the most important publications within our field of interest.

Naturally, no matter how hard the Organizing Committee works, or how enticing is the program, the final success of the whole Meeting depends upon the participation of everybody! So, start making your plans now and if necessary start putting a little money aside, as we are only about nine months away from the appointed date.

On behalf of the Organizing Committee, I do urge you to consider joining us at La Rochelle. I can assure you that you will not regret it, as we will most certainly spend an extremely pleasurable weekend, in a delightful place, with the possibility of learning a lot from so many knowledgeable researchers and collectors, Cone lovers all of them! Above all, it will be fun!

So, let's do it!!

António Monteiro

We hope to see your contribution in the next TCC!