





Editor
António Monteiro

Layout André Poremski

Contributors
Michel Balleton
Harry John Berryman
Robert Eason
Joaquín M. Inchaustegui
Janine Jacques
Loïc Limpalaër
Felix Lorenz
Guido T. Poppe
David Touitou
Philippe Quiquandon

On the Cover

Conus episcopatus with eggs,

Seychelles - photo courtesy of

David Touitou

Note from the Editor

Dear friends,

We gladly bring you a new issue of TCC, packed with what we hope you will agree to consider quite interesting new articles on Cones. I do thank all the authors who sent along their contributions. It is obviously redundant to say that we could not have done this without them!

The ongoing piece on the etymology of Cone species comes to an end in this issue, although a few points remained unsettled. Any further comments and suggestions on those will be most appreciated.

You will also find the usual section referring to recent publications, especially when they include the description of new taxa. The Cone world is alive and kicking!

Registration for the 3rd International Cone Meeting (Madrid, 3-5 October) is in full swing. We will have a great event, so do make up your mind to join us there and be sure to send in your dully filled registration form and reserve accommodation. See you all in Madrid!

António Monteiro

In This Issue

Who's Who in Cones

Loïc Limpalaër 6

Exceptional Specimens

Philippe Quiquandon 7-8

Conidae from the Seychelles

David Touitou 9-21

A Baby gloriamaris

Robert Eason 22

New Publications

António Monteiro 22-36

Conidae from French Polynesia

David Touitou & Michel Balleton 37-42

A Few Mysteries of a Well-Known Species

António Monteiro 43-45

Interesting Finds From the Komodo Island Area, Indonesia

Felix Lorenz 46-47

A Word to the Wise?

Joaquín M. Inchaustegui 48

The ILLUSTRATED CATALOG OF THE LIVING CONE SHELLS by John K. Tucker

& Manuel J. Tenorio – A Review (*)
Guido T. Poppe

Guido T. Poppe 49-53

A Selected Bibliography for Conus Lovers

Guido T. Poppe 53-55

Etymology of Cone Species Letters T-Z

Antonio Monteiro 56-60

A Note on TCC #24

Harry John Berryman 60

3rd International Cone Meeting Madrid, Spain 3-5 October, 2014 61-66

Who's Who in Cones

Loïc Limpalaër

was born in 1965 and began collecting seashells in 1978, at the age of twelve. I borrowed the "Hamlyn Guide to Seashells of the world" by A.P.H. Oliver – in its French translation – from the town's Library and I got fascinated by the beauty of shells. Soon after I travelled to Britanny and collected and bought my first shells. Among these was a beautiful "Cypraea violacea" that I was unable to identify in the books that were available to me at the time. It took several years before I understood that it was a mere Cypraea tigris treated with acid to reveal the underlying violet layers of the shell... That is what happens to beginners.

During the following years I had a slowly growing generalist collection. In fact I had only little money to spend in shells and I was very busy as an accountancy student. After completing my diplomas I began to work and got married. Since then I have been living in the vicinity of Beauvais, sixty kilometres to the north of Paris. From my union with my wife, Melba, four children were born. We are still happy with two daughters and one son; my eldest son, Alexandre, was victim of a viral disease but is still alive in our hearts. Almost twenty years after his death I named Phasmoconus alexandrei after him.

When it comes to shells, things changed in the early nineties. I met experienced collectors like Pascal Boucher and Christian Niquet who kindly showed me their collections. I also joined the French club of shell collectors "A.F.C." in 1993. All that greatly helped me to improve my skills as a shell collector.

Soon afterwards I participated to my first Shell Shows in Paris and Croix (North of France) and began to specialize in a limited number of families of marine Gastropods. Among these are the *Conidae*. I also have collections of Neritidae, Littorinidae, Cerithiidae, Stromboidea and Cypraeidae.

I also started to study the literature that was available to me at the time. The reading of the monumental "Manual of the Living Conidae" by Röckel, Korn & Kohn prompted me to study in depth the taxonomy of the family. Since then my library always kept growing.

In the Paris branch of A.F.C. I met Thierry Dandrimont who rapidly became a great friend. Thanks to him I had

the opportunity to spend a few weeks in Mauritius in 1999. I keep great memories of this trip. Back from Mauritius, Thierry and I got into the habit of attending shell shows together, which we still do that nowadays.

Soon after, thanks to my professional skills I also became the treasurer of A.F.C. Fifteen years later I still enjoy many nice moments with my friends of the Board and I am happy to bring my modest contribution to the work of the club volunteers who put together and produce our magazines Xenophora and Xenophora Taxonomy and to the indefatigable people who organize Shell Shows in Paris.

At the same time I met Eric Monnier and hence discovered both his outstanding collection and an extraordinarily kind man. We rapidly became friends and began to concentrate our interest in Cones. We focused specifically on the taxonomy of the family at the specific level. Studying our collections and the literature we came to the conclusion that the diversity at specific level in the family *Conidae* was significantly underestimated.

I have now been gathering taxonomic publications for more than twenty years. With the help of the Internet this

Exceptional Specimens

Philippe Quiquandon

task became easier, as it is now possible to consult most of the scientific literature of the 18th and 19th centuries and many of the more recent publications without leaving one's armchair at home. This considerably helped me to improve my knowledge on *Conidae*.

My interest is focused on taxonomy and systematics. As a child and teenager I was fascinated by the Evolution of life and was fond of dinosaurs and other fossil animals. Now I try to understand the relationships and origins of the recent species of the families I collect. In the last years I began to buy Tertiary fossil shells of the families I collect to better understand their evolution. Well, I must say that in *Conidae* this is a very difficult task as the patterns are missing in most fossils and the shape and sculpture do not give much information.

Finally it took many years before I felt ready to publish descriptions of new species. In 2010 Eric and I published our first description of a new species of *Conidae*: *Lautoconus dorotheae* is a nice chestnut species from the Senegalese waters. Up to now, I participated in the description of a little over ten new species of *Conidae* and many more are to come in the near future. I want to praise here the tireless work and infinite patience of Alain Robin who photographs our shells and allows us to publish nice plates to illustrate our papers.

Since 2010 I am working with Eric Monnier, Alain Robin, and Christophe Roux on an Iconography of all living species of *Conidae*. This is a complicated task as the specific and generic taxonomies are changing rapidly and some groups are poorly studied and need more detailed research. Moreover, new species are regularly introduced by other authors and we need to evaluate their validity, get specimens and insert them in the book. Even so, we hope have it published soon.

Our friend Philippe Quiquandon has sent a few exceptional specimens, which we are glad to share with our readers.





Darioconus auricomus (Hwass in Bruguière, 1792) New Caledonia 63.4 mm





Eugeniconus nobilis skinneri (da Motta, 1982) Bali 70.0 mm





Dendroconus figulinus (Linnaeus, 1758) Tanzania 100.7 mm

Conidae from the Seychelles

David Touitou

In order to have an exhaustive species list, I used two different books:

- Marine Shells of the Seychelles Alan Jarret book
- The Manual of Living Conidae Röckel, Korn & Kohn

Both are recent and good litterature to start with. Unfortunately these two books offer a different list concerning Seychelles cone shells. The one from A. Jarret shows 56 species and Röckel, Korn & Kohn one roughly 80.

I must add the following information to your knowledge: even if the Marine shells of the Seychelles is the most recent book, the information inside was collected a long time ago while Mr Alan Jarret was living there. He started the book but never finished it and much later, he decided to publish his huge work. At the time he had poor information about deeper species from 20-60m as scuba was not as common as today. I guess he and his mates did not have the chance to get their hands on all the species there. That's propably the reason why there is a huge difference between these two books.

Seychelles are unique and may not host all the species listed in *The Manual of Living Conidae* though. I can take the example of *Conus textile*, Linné 1758. It seems that the species is not present there... Mr Jarret did lot list it and I never saw it even if elsewhere it is a common species... And it shall be present when you read *The Manual of Living Conidae*. Meaning the real number is not known yet (and may not be for many more years). We can say that it is likely to be between 60 and 80.

Another important remark: the Seychelles islands are spread over a wide territory (115 islands). These islands can be separated by huge distances. And, like French Polynesia, the Seychelles may vary a lot depending on the island you study. The most known and visited (dived) islands are the Inner Islands (Mahe, Praslin, La Digue, Curieuse, Silhouette, Ile du Nord, Félicité, Marianne,

Grande Soeur, Petite Soeur, Cousin, Cousine, Frégate, Aride,...) and they all are made from granite rocks (shown on any local postcards). At the same time you may have coral islands (still Inner Islands) like Denis Island (Far & North of Praslin) and Bird Island.

Much farther, you may reach Outer Islands, made of atolls:

- Coetivy Island
- Amirantes Group: Remire, D'Arros, Desroches, Etoile, Boudeuse, Marie-Louise & Desnoeufs
- African Banks: Banc Africain & Ile du Sud
- St.-Joseph Atoll
- Poivre Atoll
- Alphonse & St.-Francois Atolls: Alphonse, Bijoutier & St. Francois
- Farquar group: Farquar Atoll & Providence Atoll
- Aldabra group ("close" to Madagascar): Aldabra Atoll (which has many endemic species, like birds, fishes,... maybe seashells, and is a protected Natural Reserve by UNESCO), Cosmoledo Atoll, Astove & Assomption

We can say that these farther islands are less visited and seashells there were not that much studied, meaning that some species may only live on these far wild islands and one must reach these quiet spots to try to get his hands on all species...

Remarks

Conus textile or Conus archiepiscopus have not been found yet in the Seychelles (no verified record in 2013). They have been replaced by Conus canonicus which is locally common. Locally, C. canonicus is very variable in pattern. Often bleuish it may offers some original pattern in the maner of C. archiepiscopus f. verriculum (see below). Could be present in the far away islands though.

Conus barthelemyi is reported from Seychelles but I could not see any specimen. Mr Rawlingson Plant

mentions this species in the Conch-L discussion (He has passed now and I was not able to get in touch with him).

Conus gubernator is locally related to Conus gubernator f. leehmani (very close often and sometimes represent intergrades betwen Conus gubernator & Conus gubernator f. leehmani)

Conus episcopatus is highly variable in pattern and often have huge white triangles that are sometimes confluent.

Conus pennaceus are different from other localities from Indian Ocean. It shall be treated as a local variation as no description have been made yet (2013). Though some authors (Manual of the living CONIDAE) have related some Seychelles specimens to Conus pennaceus f. marmoricolor Melvill, 1900.

Conus varius is most of the time small and very clear, yellowish with few markings.

Conus legatus may reach 60mm as some other Indian oceanr localities (La Réunion).

Conus omaria is very uncommon and is related to Conus patonganus da Motta, 1982

Conus inscriptus has been found there in moderately deep water (trawlers), known as *Conus keatii*.

Conus zonatus is very rare there and their habitat has not been established yet. Though, sevral nice specimens have been found in Anse Marie-Louise's gap (see HSN, Mr Ballentine article).

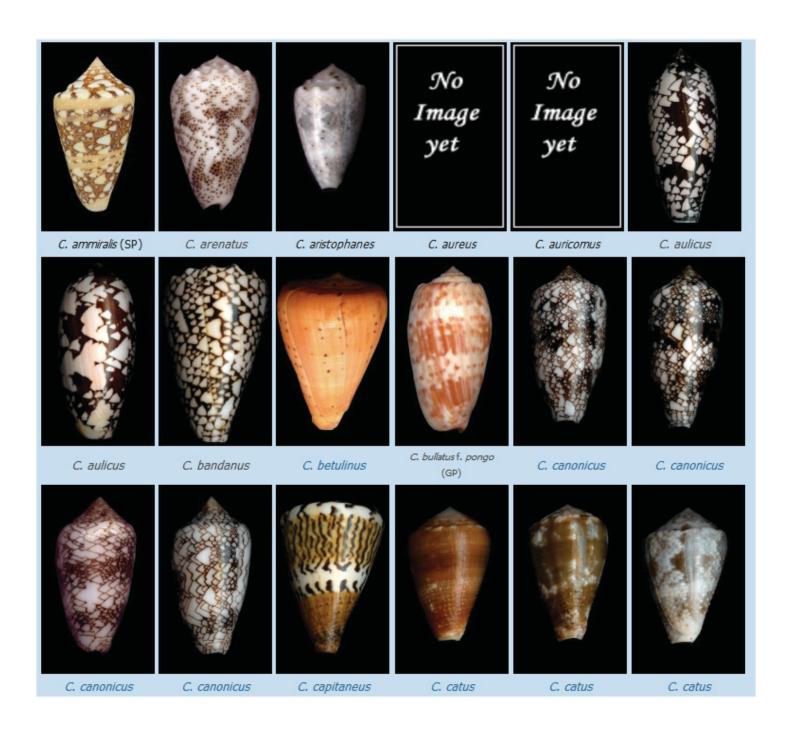
Rarity grading

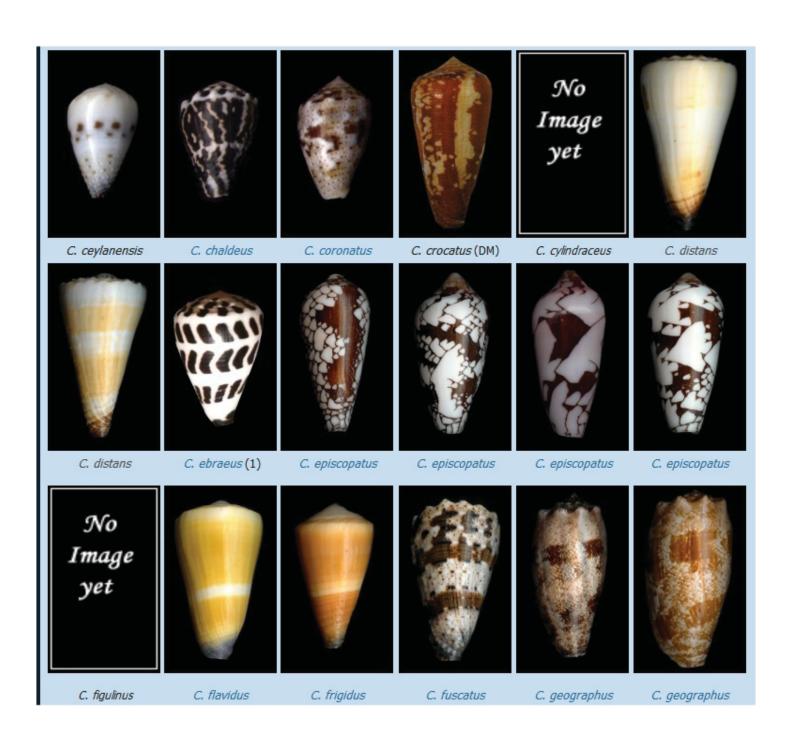
Very Common - Common - Moderately Common - Uncommon - Moderately Rare - Rare - Very rare

Cone shells listed in A. Jarret's Book & modifications from author (David Touitou)

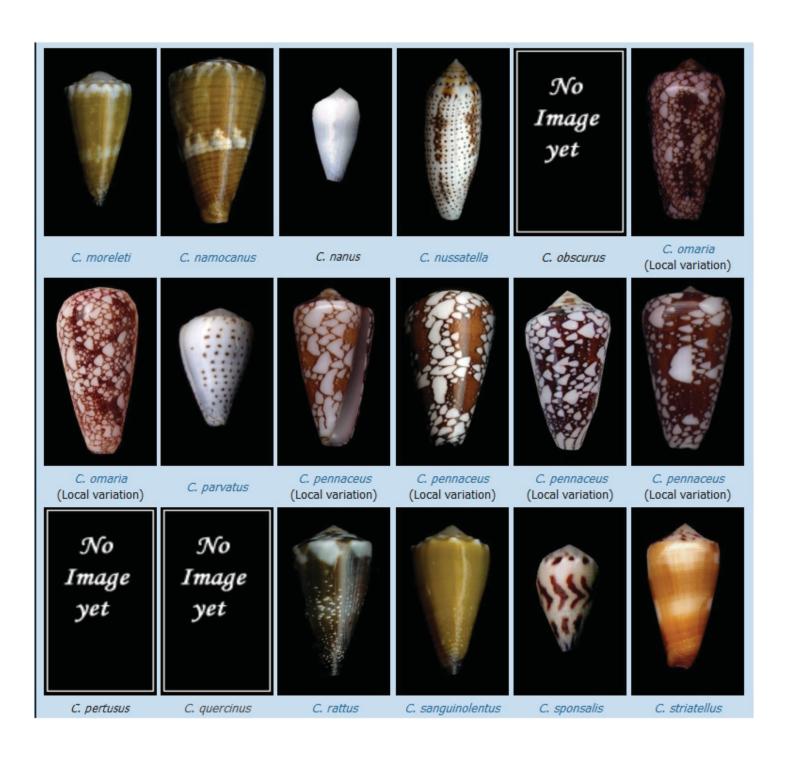
All shells displayed come from collection of Authro and have been found by author. Except: *Conus bullatus* (Collection Giancarlo Paganelli).

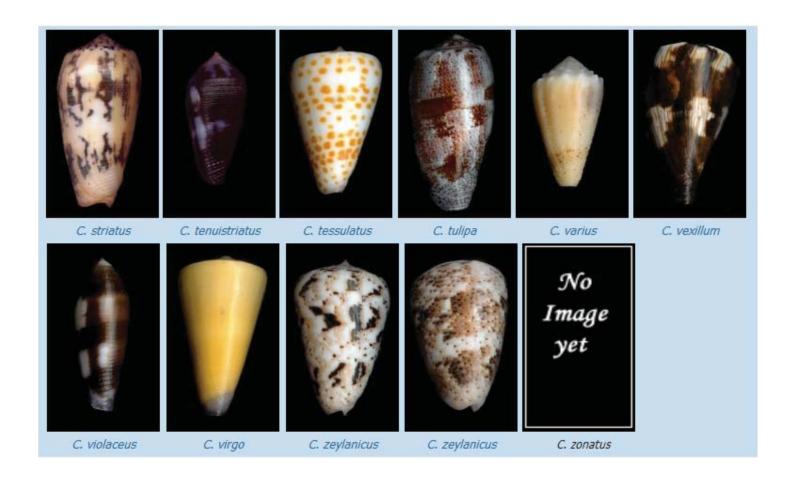
- (SP) http://www.shellspassion.com (I never found this species, this images was kindly sent by P. Quiquandon)
- (GP) http://www.coneshell.net (I never found this species, this image was kindly sent by G. Paganelli)
- (DM) (I never found this species, this image comes from the R.K.K. and the specimen from Da Motta collection is at SMMS)
- (4) (I never found this species, this image comes from the R.K.K. and the specimen from BMNH)
- (1) *Conus ebraeus* has now a know criptic species named *Conus judaeus* and is very difficult to distinguish without radular studies. The specimen shown could be related to either species.













Conus aulicus



Conus aulicus



Conus canonicus



Conus gubernator



Conus episcopatus



Conus geographus with eggs



Conus gubernator with eggs



Conus legatus



Conus omaria



Conus pennaceus



Conus pennaceus



Conus tulipa

A Baby gloriamaris

Robert Eason

As is well known, very large specimens even of the most common species are particularly desired by collectors, World record sizes usually reaching very high prices indeed. Nevertheless, *parvus est bellus* – as the Latin goes. Small is beautiful indeed and our friend Robert Eason has recently acquired a very small specimen of *Cylinder gloriamaris* (Chemnitz, 1777). This baby Glory-of-the-Seas was taken in nets, 35-40 fathoms deep, at night, in Bogo, Northeast Cebu, in the Philippines. It is only 13.69 mm long and 5.45 mm wide and certainly one of the smallest ever brought to our attention.



New Publications

1) Xenophora Taxonomy

Two more issues of the young magazine published by the Association Française de Conchyliologie have appeared since the publication of TCC #24. In them, a number of articles dealing with Cones have been included:

- "New informations and specimens of *Darioconus laueri* Monnier & Limpalaër, 2013", by Loïc Limpalaër & Eric Monnier, *Xenophora Taxonomy* #2, pp. 3-4
- "New species of *Africonus* (*Gastropoda*, *Conidae*) from Boa Vista in the Cape Verde Archipelago: Molecular and Morphological Characterization", by Manuel J. Tenorio, Carlos M. L. Afonso, Regina L. Cunha & Emilio Rolán, *Xenophora Taxonomy* #2, pp. 5-21 (including Plates 1-3)

In this article, the following new taxa are proposed:

Africonus swinneni Tenorio, Afonso, Cunha & Rolán, 2014



Holotype (23.6 mm), Muséum National d'Histoire Naturelle, Paris, France

Distribution: Known only from the type locality, Porto Ferreira, East coast of Boa Vista Island, Cape Verde

Archipelago

Etymology: Named after Frank Swinnen, well-known Belgian malacologists, a specialist in the study of the Macaronesian mollusk fauna.

Africonus fiadeiroi Tenorio, Afonso, Cunha & Rolán, 2014



Holotype (26.6 mm), Muséum National d'Histoire Naturelle, Paris, France

Distribution: Known only from the type locality, Derrubado, North coast of Boa Vista Island, Cape Verde Archipelago

Etymology: Named after Ramiro Fiadeiro, well-known Portuguese shell dealer specialized in Cape Verde shells, particularly *Conidae*.

For the description of these new species, advanced methods were used, including statistical morphometric analysis of the shell, comparison of radular teeth morphology, DNA sequencing and phylogenetic analysis.

A third population, from Ervatão, Northwest Boa Vista Island, was also examined using the same methods. The authors conclude that it is conspecific with *A. borgesi*

(Trovão, 1979).

- "Description of a new *Profundiconus* from Togian Island, Sulawesi (Indonesia): *Profundiconus stahlschmidti* sp. nov. (*Gastropoda*, *Conilithidae*)", by Manuel J. Tenorio & John K. Tucker, *Xenophora Taxonomy* #2, pp. 36-43 (including Plate 1)

In this article, the following new taxon is proposed:

Profundiconus stahlschmidti Tenorio & Tucker, 2014



Holotype (10.5 mm), Senckenberg Forschungsinstitut und Naturmuseum Frankfurt, Germany

Distribution: Found only dead in shell grit from the type locality, Pasir Tengah Atoll, Togian Islands, Sulawesi, Indonesia

Etymology: Named after Dr. Peter Stahlschmidt, a malacologist, who collected the type series and has participated in expeditions to many areas in the Indo-Pacific.

- "Fulgiconus santinii (Gastropoda: Conidae), a new surprising species from the Fiji Archipelago", by Eric Monnier & Loïc Limpalaër, Xenophora Taxonomy #3, pp. 15-25 (including 4 plates)

In this article, the following new taxon is proposed:

Fulgiconus santinii Monnier & Limpalaër, 2014



Holotype (28.61 mm), Muséum National d'Histoire Naturelle, Paris, France



Paratype 12 (25.63 mm) & Paratype 16 (26.59 mm)

Distribution: Known only from the type locality, Dollar

Bay, Naviti Island, Yasawa Group, Fiji Archipelago

Etymology: Named after Olivier Santini, French cone collector and well-known shell dealer.

-"New Species of *Conidae* and *Conilithidae* (*Gastropoda*: *Conoidea*) from the Bahamas, Eastern Caribbean, and Brazil", by Edward J. Petuch & Robert F. Myers, *Xenophora Taxonomy* #3, pp. 26-46 (including 3 plates)

In this article, the following new taxa are proposed:

Conasprelloides coltrorum Petuch & Myers, 2014

Holotype (73 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Along the coastlines of Espírito Santo and Rio de Janeiro States, Brazil

Etymology: Named after Marcus and José Coltro, well-known Brazilian conchologists and shell dealers

Gradiconus honkerorum Petuch & Myers, 2014

Holotype (20 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Abaco Islands, Little Bahama Bank, Bahamas

Etymology: Named after Thomas and Paula Honker, well known conchologists from Florida, U.S.A.

Lamniconus patriceae Petuch & Myers, 2014

Holotype (38 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: From Vitória (Espírito Santo State) to

E. PETUCH & R. MYERS - New species of Conidae and Conilithidae from the Bahamas, Eastern Caribbean, and Brazil



- A, B = Conasprelloides coltrorum Petuch and Myers, new species. Holotype, length 73 mm, trawled from 60 m depth off Vitoria, Espiritu Santo State, Brazil. MZSP 116141.
- C, D = Gradiconus honkerorum Petuch and Myers, new species. Holotype, length 20 mm, 2 m depth off Green Turtle Cay, Abaco Islands, Bahamas. MZSP 116148.
- E = Gradiconus anabathrum (Crosse, 1865), length 42 mm, off Goodland, Ten Thousand Islands, Collier County, Florida. For comparison with Gradiconus honkerorum.
- F, G = Lamniconus patriceae Petuch and Myers, new species. Holotype, length 38 mm, trawled from 300 m depth off Macae, Rio de Janeiro State, Brazil. MZSP 116142.
- H = Lamniconus patriceae Petuch and Myers, new species. Paratype, length 42 mm, trawled from 300 m depth off Macae, Rio de Janeiro State, Brazil. E.J. Petuch collection.
- I = Lamniconus carcellesi (Martins, 1945), length 42 mm, trawled from 100 m depth off Tramandai, Rio Grande do Sul State, Brazil. For comparison with Lamniconus patriceae.

38 XENOPHORA TAXONOMY3 - APR 2014

Cabo Frio (Rio de Janeiro State, Brazil

Etymology: Named after Patrice Marker, underwater photographer and marine naturalist.

Coltroconus henriquei Petuch & Myers, 2014

Holotype (13 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Known only from Royal Charlotte Bank, Bahía State, Brazil

Etymology: Named after the late Henrique Grell Schirrmeister, son of Eduardo Schirrmeister, wellknown Brazilian conchologist.

Jaspidiconus arawak Petuch & Myers, 2014

Holotype (15 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Known only from the central Grenadine Islands

Etymology: Named after the Arawak Indians, original inhabitants of the Grenadines and Lesser Antilles. The taxon is proposed as a noun in apposition.

Jaspidiconus berschaueri Petuch & Myers, 2014

Holotype (18 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Known only from Sint Maarten Island (Saint Martin on the French half), Lesser Antilles

Etymology: Named after David Berschauer, well-known diver and Cone collector from California, U.S.A.

Jaspidiconus ericmonnieri Petuch & Myers, 2014

Holotype (48 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Coasts of Espírito Santo and Rio de Janeiro States, Brazil

Etymology: Named after Dr. Eric Monnier, well-known French Cone specialist.

Jaspidiconus herndli Petuch & Myers, 2014

Holotype (17 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Known only from the southern islands of the Bimini Chain, northwestern edge of the Great Bahama Bank, Bahamas

Etymology: Named after Günther Herndl, well-known Austrian diver and Cone collector.

Jaspidiconus ogum Petuch & Myers, 2014

Holotype (17 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Known only from the southern end of Itaparica Island and the mouth of Todos os Santos Bay, Bahía State, Brazil

Etymology: Named after the god Ogum (or Ogoun), one of the Orixás of the Macumba Religion of Brazil. The taxon is proposed as a noun in apposition.



Figure 2. New Species of Conolithidae from Brazil and the Lesser Antilles.

- A, B = Coltroconus henriquei Petuch and Myers, new species. Holotype, length 13 mm, on carbonate mud, 35 m depth on Royal Charlotte Bank, Bahia State, Brazil. MZSP 116143.
- C = Coltroconus henriquei Petuch and Myers, new species. Paratype, length 13 mm, on carbonate mud, 35 m depth on Royal Charlotte Bank, Bahia State, Brazil. E.J. Petuch collection.
- D, E = Jaspidiconus berschaueri Petuch and Myers, new species. Holotype, length 18 mm, on beach at Great Bay, Philipsburg, Saint Maarten/Saint Martin Island. MZSP 116150.
- F = Jaspidiconus berschaueri Petuch and Myers, new species. Paratype, length 20 mm, on beach at Great Bay, Sint Maarten/Saint Martin Island. E.J. Petuch collection.
- G, H = Jaspidiconus ericmonnieri Petuch and Myers, new species. Holotype, length 48 mm, trawled by fishermen from 60 m depth off Vitoria, Espiritu Santo State, Brazil. MZSP 116144.
- I = Jaspidiconus ericmonnieri Petuch and Myers, new species. Paratype, length 46 mm, trawled by fishermen from 60 m depth off Vitoria, Espiritu Santo State, Brazil. E.J. Petuch collection.
- J, K = Jaspidiconus arawak Petuch and Myers, new species. Holotype, length 15 mm, from 3 m depth near coral reefs off Petit Martinique Island, Grenadines (Grenada Dependency), Lesser Antilles. MZSP 116149.

 38 ⊠ XENOPHORA TAXONOMY3 APR 2014



Figure. 3. New Species of Conolithidae from the Bahamas and Brazil.

- A, B = Jaspidiconus heradii Petuch and Myers, new species. Holotype, length 17 mm, on collific carbonate sand, 5 m depth, east of Victory Cay. Birmini Chain, northwestern Great Bahama Bank, Bahamas. MZSP 116151.
- C = Jaspidiconus herndli Petuch and Myers, new species. Paratype, length 13 mm, on collitic carbonate sand, 5 m depth, east of Victory Cay,
- Birnini Chain, northwestern Great Bahama Bank, Bahamas. E.J. Petuch collection.

 D, E = Jaspidiconus poremskii Petuch and Myers, new species. Holotype, length 16 mm, on sand and rubble, 1 m depth near reef, off Corumbau, Bahia State, Brazil. MZSP 116147.
- F, G = Jaspidiconus simonel Petuch and Myers, new species. Holotype, length 20 mm, in sand at extreme low tide, Arraial do Cabo, Rio de Janeiro State, Brazil, MZSP 116146.
- H, I = Jaspidiconus ogum Petuch and Myers, new species. Holotype, length 17 mm, in sand off Aratuba, Itaparica Island, Bahia State, Brazil. MZSP 116145.
- J, K = Jaspidiconus jaspideus (Grnelin, 1791), length 22 mm. in sand, 3 m depth, off Pirates Bay, Tobago Island, Trinidad and Tobago. For comparison with Jaspidiconus ogum and Jaspidiconus berschaueri.

46 E XENOPHORA TAXONOMY3 - APR 2014

Jaspidiconus poremskii Petuch & Myers, 2014

Holotype (16 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: Most of the coast of Bahía State, from Corumbau, near Salvador, to the Pedra Lixa reef complex, on the Abrolhos Platform

Etymology: Named after André Poremski, well-known diver, photographer and Cone shell researcher from Washington DC.

Jaspidiconus simonei Petuch & Myers, 2014

Holotype (20 mm), Museum of Zoology of the University of São Paulo, Brazil

Distribution: From Guarapari (Espírito Santo State) to central Rio de Janeiro State, Brazil

Etymology: Named after Dr. Luiz Ricardo de Simone well-known Brazilian malacologists of the Zoology of the University of São Paulo, Brazil

- "Recent findings from the Islands of Maio and Boa Vista in the Cape Verde Archipelago, West Africa: Description of three new *Africonus* species (*Gastropoda: Conidae*)", by Carlos M. L. Afonso & Manuel J. Tenorio, *Xenophora Taxonomy* #3, pp. 47-60 (including Plates 1-3)

In this article, the following new taxa are proposed:

Africonus santanensis Afonso & Tenorio, 2014

Holotype (17.1 mm), Museo Nacional de Ciencias Naturales de Madrid, Spain



Distribution: Northwest coast of Maio Island, Cape Verde Archipelago

Etymology: Named after the type locality (Praia Santana, Northwest coast of Maio).

Africonus gonsaloi Afonso & Tenorio, 2014



Holotype (19.3 mm), Museo Nacional de Ciencias Naturales de Madrid, Spain

Distribution: Known only from the type locality, Praia Gonçalo, Northwest coast of Maio Island, Cape Verde Archipelago Etymology: Named after both the type locality (Praia Gonçalo, Northwest coast of Maio) and Gonçalo Rosa, well-known Portuguese shell dealer and nature photographer; following the rules of the International Code for Zoological Nomenclature (ICZN), the use of an "s" in the name gonsaloi is intended to preserve Portuguese phonetics for "Gonçalo".

Africonus condei Afonso & Tenorio, 2014



Holotype (20.4 mm), Museo Nacional de Ciencias Naturales de Madrid, Spain

Distribution: Known only from the type locality, Baía Grande do Derrubado, North coast of Boa Vista Island, Cape Verde Archipelago

Etymology: Named after Francisco Javier Conde de Saro, a well-known Spanish conchologist who has participated in several collecting expeditions to the Cape Verde Islands.

2) Nature Communications

The online-only, multidisciplinary journal Nature Communications (see www.nature.com/naturecommunications) has recently published the following paper:

- "Evolution of separate predation- and defenceevoked venoms in carnivorous cone snails", by Sébastien Dutertre, Ai-Hua Jin, Irina Vetter, Brett Hamilton, Kartik Sunagar, Vincent Lavergne, Valentin Dutertre, Bryan G. Fry, Agostinho Antunes, Deon J. Venter, Paul F. Alewood & Richard J. Lewis, Nature Communications 5:3521 DOI: 10.1038/ncomms4521

The authors study the chemical composition of distinct venoms used by cone snails in response to predatory or defensive stimuli, showing that "the defence-evoked venom of *Conus geographus* contains high levels of paralytic toxins that potently block neuromuscular receptors, consistent with its lethal effects on humans.

In contrast, *C. geographus* predation-evoked venom contains prey-specific toxins mostly inactive at human targets"; they porpose that "defensive toxins, originally evolved in ancestral worm-hunting cone snails to protect against cephalopod and fish predation, have been repurposed in predatory venoms to facilitate diversification to fish and mollusk diets".

3) Marine Biodiversity Records

The Marine Biodiversity Records is an electronic journal published on the Cambridge Journals website by the Marine Biological Association of the U.K.

A recent issue contains an important paper on Cones:

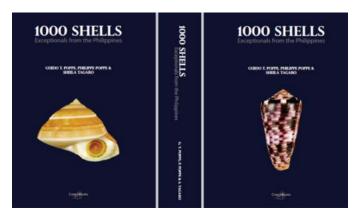
- "Biodiversity and habitats of reef molluscs of families *Conidae* and *Conilithidae* (*Neogastropoda*) off northern Roatan Island (Honduras)", by Anton E. Oleinik, *Marine Biodiversity Records*, Volume 7, 2014, e34 (pp. 1-6)

Here is the abstract:

"Five genera and eight species of gastropods of families *Conidae* and *Conilithidae* were observed in their natural habitats on the southernmost portion

of the Mesoamerican Barrier Reef, off the northern coast of Roatan Island, Honduras. Fifty per cent of species are widespread Caribbean—western Atlantic species, whereas 50% are endemic to the Nicaraguan biogeographical subprovince and Roatan Island. Multiple sightings during night SCUBA diving operations revealed that the reef off northern Roatan supports a healthy and diverse population of conoidean gastropods. Distribution of all recorded species by depth and habitat type revealed a distinct reef partitioning between the 4 most commonly occurring species."

4) 1000 Shells – Exceptionals from the Philippines



1000 Shells – Exceptionals from the Philippines, by Guido T. Poppe, Philippe Poppe & Sheila Tagaro, ConchBooks, Germany, 2014

ConchBooks have recently published this two-volume boxed set, which aims "to provide lovers of 'beautiful' natural history with a concrete memento that should give them pleasure" by illustrating a large number of "highly desirable" specimens that have been included in the regular auctions organized by Conchology Inc.

As such, this work is a valuable addition to any malacological library and a real pleasure to browse through. Each illustrated specimen has been carefully selected and is truly outstanding.

The good news for Cone lovers is that cones are in fact extremely well represented: of 839 pages depicting shells from many different families (including Gastropods – marine and terrestrial – Bivalves, Cephalopods and Scaphopods), no less than 276 show Cones. That is almost one third of the total, a great tribute to the great variability and richness of colour and pattern that cone shells present.

5) Malacologia

Issue 82 (February 2014) of the Italian journal *Malacologia*, published by Mostra Mondiale Cupra Marittima – Italia, under the editorship of Tiziano Cossignani, includes two papers about cone shells.

- "Jaspidiconus alexandremonteiroi nuova specie dal Nicaragua", by Tiziano Cossignani, Malacologia # 82, p. 9

In this article, the following taxon is proposed:

Jaspidiconus alexandremonteiroi Cossignani, 2014





Holotype (18.09 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Cayos Miskitos Archipelago, off Northeast coast of Nicaragua

Etymology: Named after Alexandre Monteiro, the son of Dâmaso Monteiro, well-known Portuguese conchologist who as supplied the type series.

- "Dieci nuovi coni da Capo Verde", by Tiziano Cossignani, Malacologia # 82, pp. 18-29

In this article, the following taxa are proposed:

Africonus silviae Cossignani, 2014





Holotype (25.0 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Morro de Areia, West Boa Vista Island, Cape Verde Archipelago

Etymology: Named after Sílvia Pereira, the wife of the Portuguese shell dealer Ramiro Fiadeiro, who specializes in Cape Verde shells, particularly cones.

Africonus zinhoi Cossignani, 2014





Holotype (21.2 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Curral Velho, South Boa Vista Island, Cape Verde Archipelago

Etymology: Named after Zinho Évora, well-known Cape-Verdean diver and shell supplier.

Africonus cagarralensis Cossignani, 2014





Holotype (17.1 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Pedra do Lume, East Sal Island, Cape Verde Archipelago

Etymology: Named after the common name for the bay where it is found, "Carra Bay".

Africonus wandae Cossignani, 2014





Holotype (27.4 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Baía Grande, South Boa Vista Island, Cape Verde Archipelago

Etymology: Named after Wanda, the mother of the Portuguese shell dealer Ramiro Fiadeiro, who specializes in Cape Verde shells, particularly cones.

Africonus cabraloi Cossignani, 2014

Holotype (12.8 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy





Distribution: Known only from the type locality, Praia Cabral, Northwest Boa Vista Island, Cape Verde Archipelago

Etymology: Named after the type locality.

Africonus bernardinoi Cossignani, 2014





Holotype (23.5 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Baía

da Parda, East Sal Island, Cape Verde Archipelago

Etymology: Named after Bernardino Monteiro, well-known Portuguese shell collector and dealer.

Africonus salletae Cossignani, 2014





Holotype (15.5 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Espingueira, North Boa Vista Island, Cape Verde Archipelago

Etymology: Named after Salleta, the wife of Zinho Évora, well-known Cape-Verdean diver and shell supplier.

Africonus diegoi Cossignani, 2014

Holotype (13.2 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, João Barbosa, South Boa Vista Island, Cape Verde Archipelago





Etymology: Named after Diego, a local boy who has helped Ramiro Fiadeiro, well-known Portuguese shell dealer, to obtain specimens.

Africonus joserochoi Cossignani, 2014

Holotype (21.0 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Calheta, Boa Vista Island, Cape Verde Archipelago

Etymology: Named after José Rocho, the father-in-law of Bernardino Monteiro, well-known Portuguese shell collector and dealer, and grandfather of Nélson Tiago, well-known Portuguese shell collector.

Africonus antonioi Cossignani, 2014

Holotype (21.0 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Baía Pequena, Boa Vista Island, Cape Verde Archipelago





Etymology: Named after António Fiadeiro, the father of Ramiro Fiadeiro, well-known Portuguese shell dealer specialized in Cape Verde shells, particularly Conidae.

Issue 83 (April 2014) of the same magazine includes the description of four other species, in the following paper:

- "Quattro nuovi coni da Capo Verde", by Tiziano Cossignani & Ramiro Fiadeiro, Malacologia # 83, pp. 14-19

The four species in question are as follows:

Africonus marcocastellazzii Cossignani & Fiadeiro, 2014





Holotype (16.1 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Praia Real, North Maio Island, Cape Verde Archipelago

Etymology: Named after Dr. Marco Castellazzi, Italian marine biologist.

Africonus antoniaensis Cossignani & Fiadeiro, 2014





Holotype (15.6 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Baía Antónia, Boa Vista Island, Cape Verde Archipelago

Etymology: Named after the type locality.





Africonus morroensis Cossignani & Fiadeiro, 2014

Holotype (12.2 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Morro de Areia, Ninho do Guincho, Boa Vista Island, Cape Verde Archipelago

Etymology: Named after the type locality.





Africonus cossignanii Cossignani & Fiadeiro, 2014

Holotype (28,5 mm), Malacologia Mostra Mondiale, Cupra Marittima, Italy

Distribution: Known only from the type locality, Praia Real, Maio Island, Cape Verde Archipelago

Etymology: Named after Vincenzo Cossignani, malacologists from Cupra Marittima and co-founder of the Museo Malacologico Piceno.

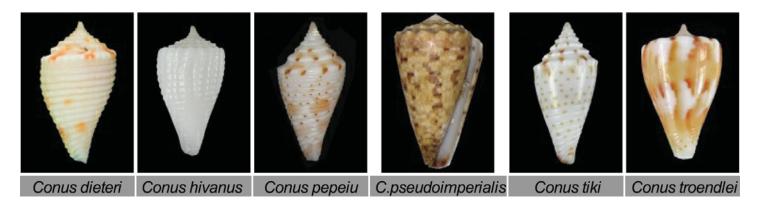
Acknowledgements

As always, I warmly thank all the authors and editors who have kindly provided photos of the type specimens for all the new taxa, and gave us permission to reproduce them in TCC.

Conidae from French Polynesia

David Touitou & Michel Balleton

Recent descriptions (Deep water species from Marquesas)



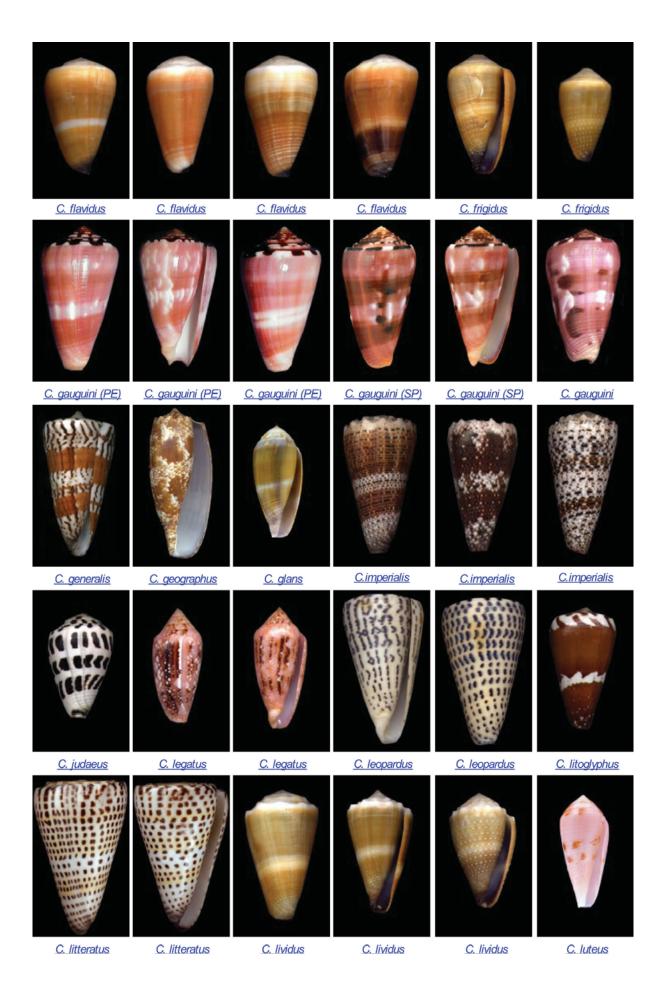
Images copyright: MNHN (Paris, France) *Conus pseudoimperialis* have been also found in the Marquesas live by divers in 25-35m and is not restricted to deep water.

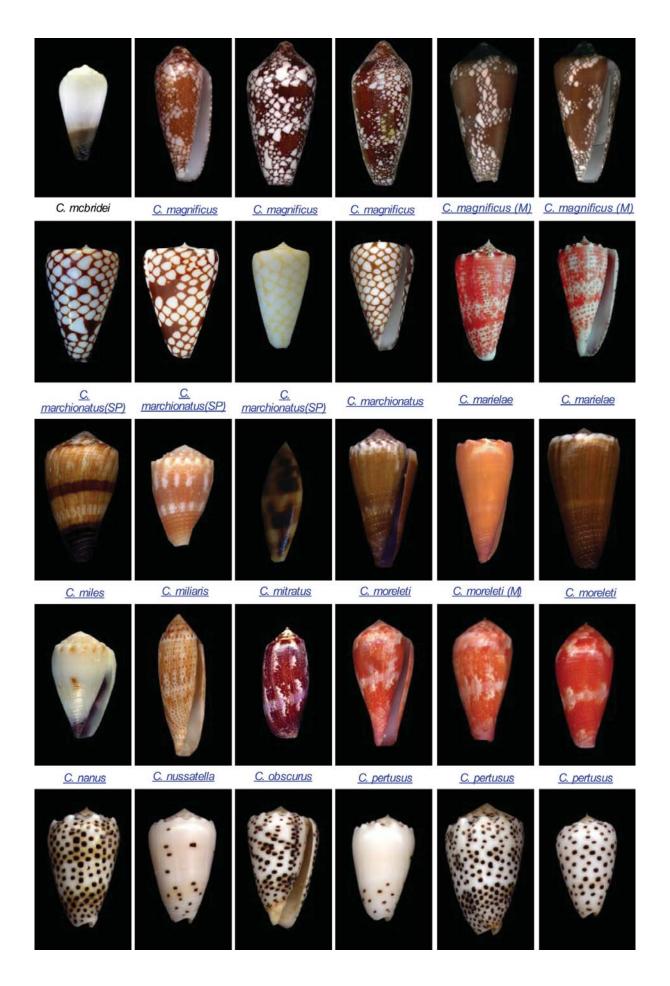
Main Iconography

(M): Marquesas color variation
(PE): image from perlae.fr (website down)
(SP): image from www.shellspassion.com
(TUA): C. textile variation from Tuamotu
(CS): image from www.coneshell.net

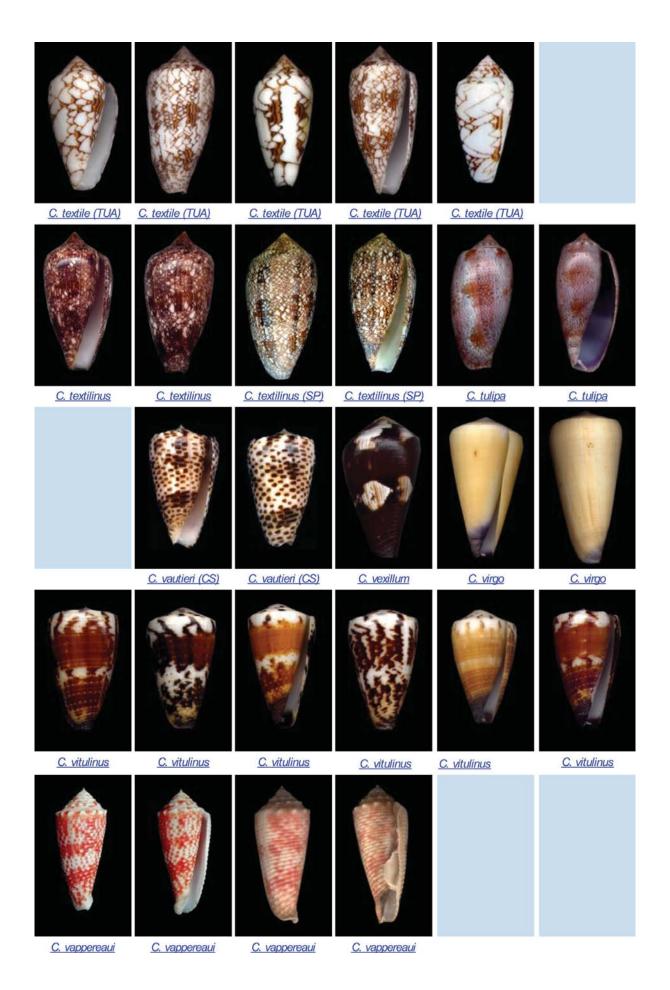












A Few Mysteries of a Well-Known Species

António Monteiro

Some Cone species are poorly known, despite intensive research, either because they come from remote locations or particularly deep waters, or because a group of potentially separate species supply a number of lookalikes that are sometimes hard to distinguish from one another. Others, on the contrary, appear to vary little and their identification usually poses no problems.

Even in the latter case, some surprises may be on hold for the collector, for instance in the form of cryptic species, virtually undistinguishable from well-known ones from shell morphology alone, separation usually requiring finer methods involving internal anatomy and even DNA sequencing.

Among the most readily identifiable species we may safely include a couple of West African ones, such as *Genuanoconus genuanus* (Linnaeus, 1758), whose pattern is so distinctive and comparatively constant that it can hardly be confused with any other, and also *Kalloconus pulcher* (Lightfoot, 1786), despite its known forms and subspecies, such as *K. p. siamensis* (Hwass in Bruguière, 1792) from the Canary Islands, *K. p. byssinus* Röding, 1798, from West Sahara and Mauritania and also *K. papilionaceus* (Hwass in Bruguière, 1792) and *K. prometheus* (Hwass in Bruguière, 1792), both usually considered mere forms of *K. pulcher*, the latter referring to the large specimens found in Angola and S. Tomé e Príncipe.

However, Cones often hide secrets even in the most innocent-looking cases and a couple of populations can defy proper identification.

One such population was recently found by my friends José Rosado and Sandro Gori during a collecting trip to Sierra Leone.

These specimens are uniformly small (the larger specimen on the photo above is 28.4 mm long) but they appear to form an established population, no large specimens having been found on the spot in any



Banana Island, Sierra Leone (April 2014)

condition whatsoever, not even fragments.

It should be stressed that juvenile *K. pulcher* are in fact known and they differ from these specimens from Sierra Leone.



Juvenile *K. pulcher* from Senegal (26.0 mm)



Juvenile *K. pulcher* from Senegal (the smaller one 13.9 mm)

Juveniles of *K. pulcher* such as the ones shown here present thicker, heavier, more slender shells, with a coarser pattern. This apparently means that the Sierra Leone population may indeed have distinct characteristics and should perhaps be regarded as a separate unity.

Stranger still – defying proper identification even – are specimens belonging to the collections of the Centro de Zoologia (Instituto de Investigação Científica Tropical), Lisbon. The specimens in question were

collected in December, 1953, in Buba, Guiné-Bissau, by Jaime Vieira Santos, who accompanied Fernando Frade in his "Missão Zoológica da Guiné" (Zoological Mission in Guinea).



33.2 mm



36.0 mm

The label accompanying the five specimens in the collection of the Centro de Zoologia (register made by Luis Burnay)



27.8 mm



35.9 mm

As can be readily appreciated from the photos alone, these specimens are vastly interesting, and they may range from an exceptional local population of *K. pulcher* to an entirely different, still undescribed species. Unfortunately, the reduced number of specimens available for study and the fact that no soft parts have been preserved, prevent any further research at the present time. It would be of the utmost importance to find living specimens that would allow for a thorough examination of the population, so let us hope that someone will get to Guiné-Bissau in the not too distant future, to look for this most beautiful Cone.



29.8 mm

Acknowledgements

I thank Prof. Luís Mendes, from the Centro de Zoologia (Instituto de Investigação Científica Tropical) for permission to photograph the specimens from Guiné-Bissau and to publish the photos here. I also thank my friends Gonçalo Rosa (for taking the photos) and Luís Burnay (for his information about the provenance of the specimens). I thank José Rosado for parting with the specimens from Sierra Leone now in my collection.

Interesting Finds From the Komodo Island Area, Indonesia

Felix Lorenz

On a recent liveaboard trip to some poorly known places (in terms of malacology) in Komodo and vicinity, I was lucky to find a few specimens of *Conidae* that seem noteworthy.

1. Conus cf. nielsenae

The single dead shell (32 mm) was found at 25 m, on muddy sand at Wainilu Bay, Rinca Is. The general appearance of color pattern on the spire and the body whorl is closest to nielsenae from Western and Eastern Australia. It also resembles the specimen from Aru illustrated by Röckel et al. as species No. 28 (RKK Pl. 73 fig. 8), except that it lacks a paler interrupted median band. That shell may also turn out to be a form of nielsenae, whose distripution might include the entire general area.

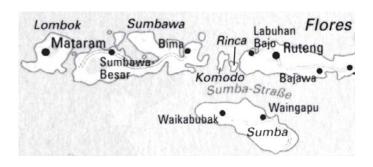
Among the shells collected during the trip, there was another species found on either side of the Australian continent (*Blasicrura rhinoceros* (*Cypraeidae*)). Obviously, this part of the Sunda Islands, situated just above the island of Timor, shares elements of its molluscan fauna with the tropical coasts of Australia.

2. Conus aurisiacus

A fresh dead shell measuring 62 mm was found in a crevice at 18 m, along a vital reef drop-off at Tengah Kecil north of Rinca. I had seen this species throughout Sulawesi, including Batu Ata, an isolated island south of Butung. To my knowledge it had not been reported from the lower Sunda islands so far.

3. Conus proximus

A complete shell and a fragment of the spire of this rather pale and slender form have been found at 6 m on muddy sand at Wainilu Bay, Rinca Is. It resembles the *cebuensis* form of *proximus*. I wonder if other similar specimens exist in collections.



4. Conus nobilis

Two specimens (43 - 58 mm) of a spectacular population were found in the south of Rinca Island, on volcanic sand at 10-15 m. The two shells resemble *nobilis f. victor* from Flores, but have a taller, stepped spire. The dark color pattern is quite remarkable. Hopefully, more specimens from this particular locality will be found, to allow comparison with the other, better known, populations.

Other *Conidae* commonly encountered in the area of Komodo and Rinca include:

arenatus, bandanus, caracteristicus, circumcisus, coffeae, corallinus, glans, eburneus, ferrugineus, imperialis, lithoglyphus, litteratus, magus, marmoreus, mcbridei, miles, miliaris, mitratus, muriculatus, musicus, nanus, mustelinus, nucleus, nussatella, pertusus, sanguinolentus, terebra, textile, traillii, varius, vexillum

Further interesting finds of other molluscan families from the trip are still pending to be sorted and passed on to the respective experts. Interestingly, the range of species we encountered in the area of Komodo and Rinca is quite different from that of the surrounding islands and Atolls, the south of Sulawesi, the "Wakatobi"-group, Batu Ata, Bali and the eastern Sundas we have visited on previous trips, e.g. Patar, Alor, Wetar and Moa.

Many thanks to Lucien & Rita, Jana, and the Damai Dua - team.



A Word to the Wise?

Joaquín M. Inchaustegui

At a recent meeting of the Houston Conchology Society I picked some bargain shells from the sales table, and as usual I selected the cones first and then the cowries and so on down to the bivalves last. In the dim light of the exhibition hall I did not concern myself much with the I.D. labels except for one or two that looked interesting. I could read one labeled "C. centurio" in a nice plastic container and since I did not have a C. centurio I put it in my bag with the other bargain shells.

Now I know why Dr. R. Tucker Abbott always told me "Jo-Jo, curate your shells soon as you get them, even if they come from me!"

When I got home, in a bright light, I could see that the *C. centurio* did not look right, the spire was almost flat and, since the shell had a very dark, brown periostracum, I put it in some bleach to remove it so I could better examine this "*C. centurio*". Well, I could soon see that the color pattern showing through the

periostracum was really that of a Conus rattus, Hwass, 1792. So now I have another "*C. rattus*" but no *C. centurio*. Perhaps, somewhere down the line someone removed the *C. centurio* and replaced it with a more common *C. rattus* to his gain and my loss.

I decided to more closely examine all the other shells and below is the result in alphabetical order. Out of 10 shells, 8 had a wrong I.D. or no I.D. label at all. Notice I am still using the generic "Conus" or "Strombus", etc. I have over 1750 species catalogued in my computer data base and it would take a long time for me to change to the new generic nomenclature. Maybe some day I will find the time to bring all of this to order. A long time friend tells me "You manage to jump to conclusions, and you overlook the obvious when it comes to shell I.D.!" I take it as a compliment, but now I see that it is one of those left handed compliments. Did I mention that he is a long time friend?

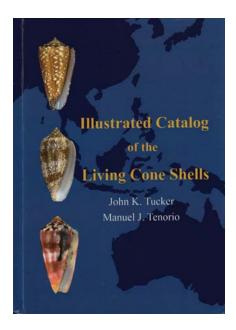
Labeled as

Busycon carica, (Gmelin, 1791
Conus imperialis viridulus, Lamarck, 1810
Conus largillerti, Kiener, 1845
Conus rattus, Hwass, 1792
Conus spurius, Gmelin, 1791
Conus victoria nodulosa, Sowerby 11, 1866
Cymatium muricinum, (Roding, 1798)
Macrocallista maculata, (Linne, 1758)
Strombus costatus, Gmelin, 1791
Thais melones (Duclos, 1832)

B. carica
No. I.D. label
C. spurious
C. centurio
C. spurius
No I.D. label
No I.D. label
No I.D. label
S. costatus
T. crassa Blainville (syn.)

The ILLUSTRATED CATALOG OF THE LIVING CONE SHELLS by John K. Tucker & Manuel J. Tenorio — A Review (*)

Guido T. Poppe



Conus are among the five most popular families in the world of shell collecting. Fortunately, Cone collectors are blessed with an extensive family of rather large shells which are infinite in their color palette and occasionally only in their shapes.

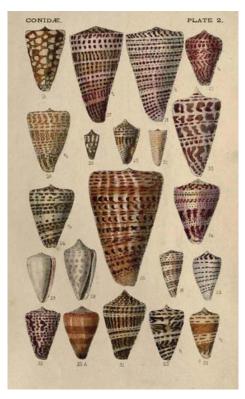
This goes in pair with lots of taxonomical and nomenclatural problems which add to the challenge and fun of building either a small or large *Conus* collection.

Conus have been documented quite well from the beginning: the monographs from Sowerby and Reeve were sold in quantity and often separately bound. Kiener got a magnificent volume on *Conus*. Other encyclopedia also contained parts on *Conidae*.

Pilsbry and Tryon resumed all this in their Manual at the end of the 19th century.

The MANUAL of CONCHOLOGY.

In 1879 George Tryon, a prominent American, started an ambitious series of books with the aim to figure all molluscan species known at that time. In 1890, the series on marine shells finished from the hand of



A plate from the Manual, Volume VI, with the *Conidae* by Tryon. A rare colored edition. Remark how the drawings are perfectly done.

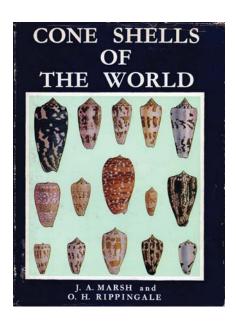
We are speaking 1884!

Henry Pilsbry. This was Volume 12. After that, Pilsbry started a much larger series on the land and freshwater mollusks. These sets of books are rare, I was told less than 200 series exist in the world. I was lucky to purchase the two series in black and white decades ago, but recently the late "Dick" Petit agreed to sell me his ultra rare colored series on the marine shells.

Post-war collectors and the baby-boomers were less blessed and their collections were rather thin-shelled, made in a period of exaggerate lumperism and with lots of "innocence".

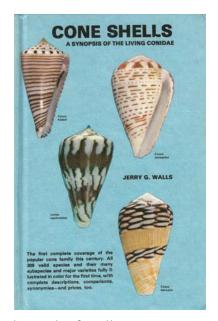
A first attempt to provide them with a modern tool covering the *Conidae* family was done by Marsh J. A.

and Rippingale O.H. in 1964. They produced an A4 format book of 166 pages and containing 22 color plates, all hand drawn and colored. Difficult to read and sometimes very difficult to recognize the species in the drawings. It was the only book available to the large majority of collectors, regarding the rarity of the Manual, published 70 years earlier! There was a second edition in 1968.

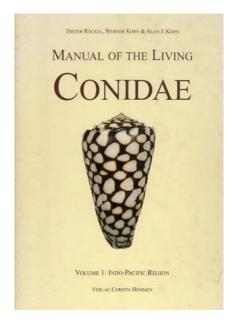


In the seventies, people started publishing more and more on *Conus*, but only poorly illustrated black and white things most of the time. By 1980, finally, literature changed dramatically and it was also the time of the first major photographic work on the family, done by Jerry Walls for TFH publications.

In his "Cone Shells, a synopsis of the Living *Conidae*", Jerry took us through 1011 pages and hundreds of color photographs. Today his taxonomic and nomenclatural work is outdated but the photographs are still useful and occasionally also his texts. While many "snob" the book today, I confess I still use it regularly when documenting this or another *Conus* for our auctions and I have the biggest respect for the gigantic task accomplished by Jerry at that time.



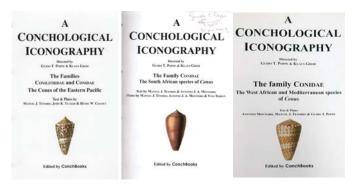
In public, the work of Walls was very commented on, often in a negative way, but in the meantime, virtually all of the *Conus* experts lived with Jerry Walls under their pillow until the next major achievement in the field: 1995, the year of publishing of what we call RKK: Röckel, Korn and Kohn, the "Manual of the Living *Conidae*".



This handsome book, which counts 517 pages and 84 color plates with hundreds of specimens figured is

regarded the bible of *Conus* collectors. But it concerns only the Volume I: Indo-Pacific region.

West African *Conus*, South African *Conus* and the *Conus* from the far western Pacific got proper treatments in three Volumes of the Iconography, published by Conchbooks under the guidance of myself and Klaus Groh.



The three parts of the *Conchological Iconography on Conidae*, first page.

So, as time went on, *Conus* after *Conus* was described from all parts in the world. The conchologists worldwide reluctantly went out of their comfort zone of lumperism and more and more started looking more carefully in the realm of these magnificent and cruel animals.

All at once also, pioneering work by my old friends Prof. Baldomero "Toto" Olivera and for some time Prof. George Vauquelin, put these shells on a prime place in the pharmaceutical research for new drugs. The story of these pioneers ends successfully today with major help to humanity.

We now know that in some areas the *Conus* are thriving by billions on the sea bottoms, especially from the shallows down to depths of 250 meters. They are major hunters: eating either other shells, worms or fishes – by the billions also. So, they are an important part of the biodiversity on these depths in many seas. This all led to more and more studies and thanks to the biochemical research, shell collectors and a few professionals, we

can say today that the *Conus* are one of the best known families among the large Neogastropods roaming on this planet. From the large majority of species we know the radula, from many their venom and at least from one species, *Conus consors*, the complete genome has been documented. The latter was an achievement under the leadership of Dr. Reto Stöcklin from Switzerland.



One of the few shells, collected by the researchers of Reto Stöcklin in the Chesterfields, used to document the genome of *Conus consors*. The author was so lucky to win this specimen on a raffle in Stuttgart, during the first "*Conus*-meeting" about three years ago by now. Slowly on, books and monographs on Caribbean *Conus* appear, but no major Volume in the Iconography as yet. The Caribbean is regarded until now the black hole by *Conus* enthusiasts. In the meantime, in 2009 Tucker & Tenorio wrote a 295 page book, published by *Conchbooks*, subdividing finally the mega-genus *Conus* in a large number of genera. There was an earlier attempt by da Motta, backed up by Gabriella Raybaudi, but this was in some way too much ahead of time!

Personally I think the Tucker and Tenorio work is a very good move, but it will still take time to get a proper assignment of many species in the correct genera. A case of slow stabilization.

But at least, the first step has been set. We can say "A small step for Tucker & Tenorio but a big step for shell-lovers, conchologists and malacologists worldwide!"

The same authors, John K. Tucker and Manuel J. Tenorio surprise us today with what I should call the first major work on Conus since RKK: *An Illustrated Catalog of the Living Cone Shells*.

This book resumes the long way and the gigantic work done since Walls! An overview of the complete family, worldwide, in one major book, everything well organized and placed in proper genera.

The authors got the back support of the worldwide conchological community for this work and dedicate their book to 4 of the most important *Conus* experts of today: Mike Filmer, Antonio Monteiro, Paul Kersten and Alan J. Kohn. On a more personal level, I got the good luck to work several weeks with Antonio on West African *Conus*, spend a week with Alan in Chicago for the Red List story and Mike visited me and we spend a pleasing time together during my Brussels Years. Paul, I met repeatedly at shell shows.

After a short Introduction, the authors take us through the new status of "Threatened" *Conus*. This is followed by a more interesting and perfectly illustrated chapter on the "Graphs and Statistics" for the 743 species of *Conus* which are considered valid in this work. Their distribution in the genera, geographically, by subfamily, and this reflected on geographic region.

Pages 21 to 65 illustrate each genus with a color photograph of a representative of the genus and a fine drawing of a typical radula for that genus. The species for each genus are listed.

On page 67 the authors start their elaborate documentation of each *Conus* name. This overwhelming descriptive part ends at page 428! They start with "*abbai* Poppe & Tagaro, 2011" as a subspecies of *Conus nobilis*. They end with "*zylmanae* Petuch, 1998", a valid species from the Bahamas.

For all these names/species they refer to the original descriptions, the types, the status, the ranges and the like, a wealth of information, much not to be found in any other book.

We here illustrate one page of the book, illustrating two of the world's most desired shells. So, you get a fine idea of what to expect



Extensive "Cited Bibliography" and very well constructed "Indexes" finish the work at page 516. Page 517 is dedicated to the achievements of both authors, interesting reading of course.

This work is the natural addition to the RKK and either as a lover of "beautiful" shells, a "connoisseur" or a "Conus" expert, this Living Cone Shells will be on your fingertips in the years to come.

As vice-president of Conchology, Inc., and continually busy with the amelioration of our Encyclopedia which, today, is the largest Iconography of Conus shells in the world with a surprising 61200 photographed and documented specimens, I must say that this book will be the major tool to refine this Iconography.

So, all our congratulations to the authors.

To visit the Encyclopedia of *Conus* online: http://www.conchology.be/?t=64

We do not forget Bob Janowsky from Mal de Mer publishing. We are grateful for the fine execution of the book on glossy paper, a handy format, nice printing and a strong cover which will keep these precious pages together for the years to come.

You can purchase this book by emailing to Philippe@conchology.be or Jess@conchology.be

If you are in Germany or nearby: Carsten or Anke Renker: conchbooks@conchbooks.de

If you are in northern America: From Donald Dan : donaldan@aol.com Robert Janowsky : books@mdmshells.com

I do not know the price in \$ in the USA, but Conchbooks (and Conchology, Inc.) sell this work at 160 euro.

We start working slowly on a renewed chapter on "shell books" for our homepage. Things are moving fast in the world of today!

A Selected Bibliography for *Conus* Lovers

Guido T. Poppe

Antonio Monteiro was so kind to invite us to publish the above newsletter in the "Cone Collector". I therefore extended a little the Iconographic qualities and added some important publications. When looking at the library on my back, I thought that a more complete, although not exclusive list of books published on the subject, may be useful for the newcomers in *Conus*.

Here it is, with some small comments here and there. These are the *Conus* works on our fingertips in the Conchology, Inc. office. I have put a STAR quotation for their importance for the collector. Based on a general collector who wants to have a good library.

- * Good work, but for the discriminating student.
- ** Excellent work, but for the one going deeper in the subject.
- *** A must to have for the collector who likes well illustrated documentary work.

There is a number of very old excellent works on *Conus* from the 19th century. You can download, I think all, for free from Biodiversity Library. Look for Reeve, Sowerby, Kiener and Küster and Weinkauff on *Conidae* and you will get amazing material there.

Their *Conidae* are usually a part of the big Encyclopedia of that time. The names and texts are most often outdated, but you will learn about figures of types, color forms and the like.

As for more modern times, the following:

1947 Mermod G. *

Catalogue des types et des exemplaires de Cônes, figurés ou décrits par Hwass, Bruguière, Lamarck, de Lessert, Kiener et Chenu, se trouvant au Musée de Genève.

Lists 196 species from the above authors with comments.

1964 Marsh J. A. & Rippingale O.H. *

Cone Shells of the World.

Quite outdated by today's standards.

1975 Kohn A.J. *

Type specimens and identity of the described species of Conus. The species described by Salis Marschlins and Röding, 1793-1798.

Well detailed analysis of the descriptions, poorly illustrated.

1976 Kohn A. J. *

Chronological analysis of the species of Conus described during the 18th century.

Well detailed analysis of the descriptions, poorly illustrated.

1979 Da Motta A.J. & Lenavat P. **

Cone Shells of Thailand.

With 8 color plates with photos, a nicely illustrated work on Thai Conus.

1979-1986 Coomans H. E., Moolenbeek R. G. and Wils E. **

Alphabetical revision of the (sub)species in the recent Conidae. (Abbas to extraordinarius).

A heroic attempt to revise the *Conus*, poorly illustrated in black and white. The small part done, from A to E is extraordinary in quality. Published in parts in Basteria, but you can find bound copies of this set of publications. No student in *Conus* can do without it.

1980 Walls J. G. ***

Cone Shells. A synopsis of the living Conidae.

See previous article.

1980 Röckel D., Rolan E., Monteiro A. **

Cone Shells from Cape Verde Islands. A difficult puzzle.

Today a little outdated, for years the only valid work for that region. Still important for students now.

1981 Estival J. C. ***

Cônes de Nouvelle-Calédonie et du Vanuatu.

Already more than 3 decades old but with 112 photographs of a quality even seldom seen today. Important small book with a nice hard cover.

1981 Kohn A. J. *

Type specimens and identity of the described species of Conus. VI. The species described 1801-1810.

Well detailed analysis of the descriptions, poorly illustrated.

1991 da Motta A. J. **

A systematic classification of the gastropod family CONIDAE at the generic level.

An attempt "avant la letter" for a nice classification in the family. With the collaboration of expert Gabriella Raybaudi. The authors subdivided mainly in subgenera, which will later to prove most of the time to be valid genera. Well illustrated. An extra number of *La Conchiglia*, historically important work.

1992 Kohn A. J. **

A Chronological Taxonomy of Conus, 1758-1840.

A major and important work for all students on *Conus*. Not illustrated, but 315 pages of information.

1995 Pin M. & Leung Tack K. D. **

The Cones of Senegal.

Before this small number, an extra yearbook of *La Conchiglia*, the West African species were a black hole.

Marcel Pin, expat in Senegal, made this first nice revision on the subject.

1995 Röckel D., Korn W. & Kohn A. J. ***

Manual of the Living Conidae. Volume I: Indo-Pacific Region.

See previous article.

2004 Monteiro A. J. A., Tenorio M. J., & Poppe G. T. ***

The Family *Conidae*. The West African and Mediterranean species of *Conus*.

In *A Conchological Iconography*. Directed by Poppe G. T. & Groh K.

The addition to RKK, but for West African and European *Conus*, superbly illustrated work. A must to have for all involved in the family.

2008 Tenorio M. J., Monteiro A. J. A. & Terryn Y.

The Family *Conidae*. The South African species of *Conus*.

In *A Conchological Iconography*. Directed by Poppe G. T. & Groh K.

The addition to RKK, but for the South African *Conus*, superbly illustrated work. A must to have for all involved in the family.

2009 Tucker J. J. & Tenorio M. J. **

Systematic classification of Recent and Fossil Conoidean Gastropods, with Keys to the genera of Cone Shells.

An important work in the history of *Conus*: a first well developed classification in genera.

2012 Tenorio M. J., Tucker J. K. & Chaney H. W.

The Families *Conilithidae* and *Conidae*. The Cones of the Eastern Pacific.

In *A Conchological Iconography*. Directed by Poppe G. T. & Groh K.

The addition to RKK, but for the western American *Conus*, superbly illustrated work. A must to have for all involved in the family.

2013 Tucker J. K. ***

The Cone Shells of Florida.

The date in the book is 2012 but published 2013 in fact. Well illustrated, with 48 color plates and hundreds of photographs. Nice texts. Documents perfectly the *Conus* of the Florida Peninsula.

2014 Tucker J. K. & Tenorio M. J. ***

Illustrated Catalog of the Living Cone Shells.

See previous article.

(*) – The present review is a revised version of the one published by the author in the Newsletter of Conchology, Inc.

THE CONE COLLECTOR ISSUE #25

Etymology of Cone Species Letters T-Z

Antonio Monteiro

We come to the last section in this detailed examination of etymology for the specific designations of cones. I have included in the list all the names usually considered to correspond to valid species and subspecies, plus the names of a few forms; other form names have been left out because they are less commonly used.

Alas, a few details have remained in shadow. In a number of instances I was unable to find a precise origin for the names. Hopefully someone will be able to provide information later on.

Speaking of which, Paul Kersten has provided the etymology for two names listed in the last instalment:

quercinus albonerosa: "albo" means white, "nerosa" is Latin for "coated", so albonerosa is "the white-coated" cone

sennottorum: Named after Gladys and John Sennott, shell collectors from Florida, U.S.A.

I have also received the following useful information from Gijs en Marianne:

- a) Perhaps *Conus stramineus mulderi* was named after a Dutch collector named Mulder, who's collection in now at NCB Naturalis. Mulder was a customer of Fulton, and bought quite some shells from Fulton.
- b) I think that *Conus spurius lorenzianus* is rather named after someone called Lorenz (cfr. the German shell dealer Felix Lorenz and the famous physicist Lorenz) than after someone called Lorenzian

I am very thankful to Paul and Gijs for their contributions. As before, I extend my thanks to all those who helped with invaluable explanations and suggestions along the way.

And without further ado, let us examine the names beginning with the letters T to Z:

taeniatus Hwass, 1792

From the Greek tainia, meaning "band" or "riccon"

telatus Reeve, 1848

From the Latin *tela*, meaning "web", hence the "webbed" cone

tenuistriatus Sowerby, 1858

From the Latin, meaning "weakly striated"

teramachii Kuroda, 1956

Named after Akibumi Teramachi (1898-1978), Japanese malacologist

teramachii neotorquatus da Motta, 1985

From the Latin, meaning "a new torquatus" (*torquatus* meaning "adorned with a collar")

terebra Born, 1778

From the Latin *terebro*, meaning "I perforate", probably referring to the shape of the shell

terebra thomasi Sowerby, 1883

Probably named after H. Thomas, an Australian artist, who made drawings for one of Bednall's papers on South Australian chitons

terryni Tenorio & Poppe, 2004 Named after Yves Terryn, Belgian naturalist

tessulatus Born, 1778

From the Latin tessellatus, meaning "mosaic"

textile Linnaeus, 1758

From the Latin *textilis*, meaning "a piece of cloth" (probably referring to the pattern of the shell)

textile archiepiscopus Hwass, 1792 From the Latin, meaning "archbishop"

textile auriger Röding, 1798 From the Latin, meaning "bearing gold" textile cholmondeleyi Melvill, 1900 Named after Reginald Cholmondeley (1826-1896), British malacologists

textile concatenatus Kiener, 1845 From the Latin concatenare, meaning "to link together" (like in a chain)

textile corbula Sowerby, 1858 From the Latin corbis, meaning "basket" (?)

textile dahlakensis da Motta, 1982 Named after the Dahlak Archipelago, in the Red Sea, off Massawa

textile eumitus Tomlin, 1926 From the Greek, meaning "well threaded"

textile euetrios Sowerby, 1882

textile neovicarius da Motta, 1982

From the Latin *neo*, meaning "new", and *vicarious* meaning "vicar", someone appointed to do the work of another (because the subspecies used to be wrongly identified as *C. vicarious* Lamarck, 1810)

textile panniculus Lamarck, 1810 From the Latin, meaning "small cloth"

textile pyramidalis Lamarck, 1810 From the Latin, meaning "pyramide-shaped"

textile scriptus Sowerby, 1858 From the Latin, meaning "written"

textile sirventi Fenaux, 1943 Probably named after Louis André Marie Sirvent (1876-1966), French zoologist

textile suzannae van Rossum, 1990 Named after Suzanna (I have no further information) textile textilinus Kiener, 1845 From the Latin, meaning "close to textile"

textile tigrinus Sowerby, 1857 From the Latin, meaning "striped like a tiger"

textile verriculum Reeve, 1843 According to Reeve, the "drag-net" Cone

thalassiarchus Sowerby, 1833 From the Greek thalassa meaning "sea", with the suffix archi meaning "most important"

theodorei Petuch, 2000 Named after the late Theodore ("Ted") Jacaruso, father of James Jacaruso

thomae Gmelin, 1791 Named after Thomas the Apostle (?)

tiaratus Sowerby, 1833

In the shape of a *tiara*, probably referring to the sculpture of the shoulder of the shell

tiaratus roosevelti Bartsch & Rehder, 1939 Named after Franklin Delano Roosevelt, (1882-1945), president of the United States of America

tiki Moolenbeek, Zandbergen & Bouchet, 2008 Named after the ancient Marquesan god Tiki, ancestor of men

timorensis Hwass, 1792 Named after Timor, na island in Southeast Asia

tinianus Hwass, 1792 Named after Tinian Island, north Marianas Islands (also known as Ladrones Islands)

tinianus aurora Lamarck, 1810 From the Latin, meaning "dawn" or "sunrise"

tinianus rosaceus Dillwyn, 1817 From the Latin, meaning "rosy" or "rose-coloured" Page 57 tirardi Röckel & Moolenbeek, 1996

Named after Philippe Tirard, naturalist employed at ORSTOM (Office de la Recherche Scientifique et Technique d'Outre-Mer, later renamed IRD, Institut de Recherche pour le Développement), New Caledonia

tisii Lan, 1978

Named after T. C. Lan, the name being a kind of phonetic transcription of the initials "TC"

tornatus Sowerby, 1833

From the Latin, meaning "made round"

tostesi Petuch, 1979

Named after Luiz Roberto Tostes, Brazilian conchologist

traceyi Tucker & Stahlschmidt, 2010 Named for Steve Tracey, a palaeontogist

traillii Adams, 1855

Probably named after Thomas Stewart Traill (1781-1862), Scottish zoologist

traversianus E.A.Smith, 1875 From the Latin, meaning "oblique" (?)

tribblei Walls, 1977 Named after the author's cat Tribble

trigonus Reeve, 1848

From the Latin *tri*, meaning "three", and the Greek gonos, meaning "angle", hence the "triangular" Cone

trigonus adami Wils, 1988

Named after William Adam (1909-1988), Belgian malacologists

troendlei Moolenbeek, Zandbergen & Bouchet, 2008 Named after Jean Tröndlé, French erudite on the molluscs of French Polynesia tuberculosus Tomlin, 1937

From the Latin, meaning "bearig tubercles"

tulipa Linnaeus, 1758

From the Turkish tülbend, meaning "tulip"

tuticorinensis Röckel & Korn, 1990

Named after Tuticorin (Thoothukudi), in southeastern India

typhon Kilburn, 1975

Typhon was a monster in Greek mythology, son of Gaia and Tartarus, who is often associated with tempests

vappereaui Monteiro, 2009

Named after Patrick Vappereau, shell collector from Tahiti

varius Linnaeus, 1758

From the Latin, meaning "diverse", "variegated"

vaubani Röckel & Moolenbeek, 1995

Named after a French research ship, the R. V. "Vauban", operateing from 1965 until the late 1980s by ORSTOM (Office de la Recherche Scientifique et Technique d'Outre-Mer, later renamed IRD, Institut de Recherche pour le Développement); the ship itself was named after Sebastien le Prestre de Vauban, (1633-1707), a French military architect

vayssierei Pallary, 1906

Named after Albert Jean Baptiste Marie Vayssière (1854–1942), French malacologist and entomologist

velaensis Petuch, 1992

Named after the Cabo La Vela on the Guaira Peninsula of Colombia

venezuelanus Petuch, 1987

Named after Venezuela, in northern South America

vexillum Gmelin, 1791

From the Latin, meaning "flag"

vexillum sumatrensis Hwass, 1792

Named after Sumatra, an island in western Indonesia

victoriae Reeve, 1843

Named after the Victoria River, Northern Territory,

Australia

victoriae complanatus Sowerby, 1866

From the Latin, meaning "levelled"

victoriae nodulosus Sowerby, 1864

From the Latin, meaning "with nodules"

vicweei Old, 1973

Named after J. Victor (Vic) Wee, conchologist from

Singapore

villepinii Fischer & Bernardi, 1857

Named after Villepin (bio?)

villepinii fosteri Clench & Aguayo, 1942

Possibly named after Richard Winslow Foster (1920-

1964), American malacologists

vimineus Reeve, 1849

From the Latin, meaning "made of wicker"

viola Cernohorsky, 1977

From the Latin, meaning "violet"

viola blatteus Shikama, 1979

From the Latin *blatta*, meaning "cockroach", probably

referring to the general shape of the shell

violaceus Gmelin, 1791

From the Latin, meaning "violet coloured"

virgatus Reeve, 1849

From the Latin, meaning "made of twigs" or "striped",

referring to the usual pattern of shells

virgo Linnaeus, 1758

From the Latin, meaning "virgin", probably referring

to the unblemished colour of the shell

visseri Delsaerdt, 1990

Named after J.S. de Visser, a conchologist

visagenus Kilburn, 1974

Named after A. Z. Visagé, a South African conchologist

vittatus Hwass, 1792

From the Latin, possibly the "ribboned" Cone

voluminalis Reeve, 1843

From the Latin *volume*, meaning "volume", itself from *volvo*, meaning "roll" (according to Reeve, the "roller"

Cone)

voluminalis filicinctus Schepman, 1913

From the Latin, meaning "banded with threads"

voluminalis macarae Bernardi, 1857

Named after Florentine Jacobine Martina Rethaan Macaré (née Ontijd) [Douarière; Madame la Baronne]

(1812-1887), Dutch conchologist

wakayamaensis Kuroda, 1956

Named after Wakayama Prefecture, in southern Japan

wakayamaensis nereis Petuch, 1979

Named after Nereus, a sea god in Greek mythology

wallacei Lorenz & Morrison, 2004

Named after Sir Alfred Russel Wallace (1823-1913),

British naturalist

wallangra Garrard, 1961

Named after Wallangra, an Australian district

A Note on TCC #24

Harry John Berryman

wilsi Delsaerdt, 1998 Named after Edward Wils, Belgian malacologists

wittigi Walls, 1977

Named after Fritz Hermann Paul Wittig, the father of Renate Wittig-Skinner, American conchologist

wittigi kongaensis da Motta, 1984 Named after Konga Island, off Laran Tuka, S. E. Flores, in Banda Sea, Indonesia

worki Petuch, 1998

Named after Robert C. Work, American zoologist, formerly of the University of Miami

xanthicus Dall, 1910 From the Greek, meaning "of a yellowish colour"

ximenes Gray, 1839

Possibly named after Ferdinando Panciatichi Ximenes d'Aragona, an Italian gentleman with an interest in Natural History

ximenes mahogani Reeve, 1843 From "mahogani", the Spanish name of the mahogany trees and their wood

zandbergeni Filmer & Moolenbeek, 2010 Named after Arnold Zandbergen, Dutch conchologist

zapatosensis Röckel, 1987 Named after Zapatos Island, Philippines

zebra Delsaerdt, 1992

From "zebra", referring to the striped pattern of the shell

zeylanicus Gmelin, 1791

From the Portuguese Ceilão, itself from the Pali language sinhalana, meaning "land of the lions", the old name for Sri Lanka

zonatus Hwass, 1792

From the Latin *zona* meaning "zone", hence the "zonate" Cone

zylmanae Petuch, 1988 Named after Linda R. Zylman, American conchologist, who collected the holotype We received from Harry John Berryman the following note, concerning the article about his collection in TCC #24:

"It has come to my attention that the picture on the introductory backdrop (*Conus marmoreus*) was in fact taken by David Touitou several years ago, but worst of all it was taken in New Caledonia. David has given his permission to leave it but to credit him and being from New Caledonia. In keeping with the display "Philippines Cones', I am replacing the picture with a Philippine picture to keep its accuracy. Sorry about that!"

I thank Harry for this explanation.





3RD INTERNATIONAL CONE MEETING

MADRID, SPAIN 3-5 OCTOBER, 2014

As everybody knows, the preparation of the 3rd International Cone Meeting, to be held next October in Madrid, is in its final stages.

We shall be holding our meeting in the prestigious setting of the Museo Nacional de Ciencias Naturales, located in the heart of the city.



There is of course much to see in Madrid, too much, in fact, to detail here, but let us simply point out the famous Prado Museum, the Retiro Park, the Royal Palace, and of course several other important museums, but also the beautiful avenues and squares, everything a real delight for the visitor. This of course means that perhaps some of the participants in our Meeting will want to extend their visit and take the opportunity to do a little tourism.

The meeting itself promises to be just as great an event as the two previous one were. The program, of which we have already sent information, includes talks, a mini-bourse, workshops and, mainly, a chance for Cone lovers to get together and discuss every possible aspect having to do with our favourite molluscan group! We will have opportunities to learn something, to acquire specimens and above all we will have fun!

The Organizing Commission, which comprises Manuel Jimenez Tenorio, Bill Fenzan, Rafael Zardoya and António Monteiro, is also indebted to the Spanish Malacological Society, for their invaluable help with logistics.



Registration of participants is well under way. We already have many names listed and hope to add many more in the near future.

We do urge you to register soon, as this will really help us to organize things, so that the whole reunion goes on smoothly, and to everybody's contentment. Remember that all necessary information – including a registration form and a hotel reservation form – can be found by visiting our website at visit www.theconecollector.com; alternatively, if you have any doubts or questions, please get in touch with António Monteiro at a.j.a.monteiro@netcabo.pt

For now, I will leave you with some further practical information, looking forward to meeting you son in Madrid!

USEFUL TRAVEL INFORMATION FOR ATTENDEES TO THE 3RD INTERNATIONAL CONE MEETING

Madrid will host the 3rd International Cone Meeting. It is the capital of Spain so it is well connected to the world through the International Madrid-Barajas Airport. There are also good connections to Madrid by train and auto, especially from Paris, France.

Arriving at Airport Madrid-Barajas

The best option to get to the Museum and the Holiday Inn Hotel from the airport is to use the underground (Metro). The fare is 4.50 euros. Line 8 of the Metro goes from terminals T1-3 or T4 to **Nuevos Ministerios** metro station. Both the Museum and the hotel are at a walking distance from this station. Alternatively, the fare for a taxi direct to any place downtown from the airport is 30 euros.

Arriving at the railway station (Atocha)

If you arrive by a high-speed long-distance train (AVE), the fare includes connection with a free commuter train to **Nuevos Ministerios** railway station. This is the best option for arriving by rail. Most commuter trains going from Atocha to the North of the city stop in **Nuevos Ministerios**.

Arriving by car

The easiest way to reach the correct address on Paseo de la Castellana in central Madrid is to follow the signs to the Santiago Bernabeu football stadium.

Alternate Accommodation

The organizing committee for the meeting has selected the Holiday Inn Madrid-Bernabeu as the "official" hotel of the meeting. Our dinner will be held at this location on Saturday evening. We have negotiated a rate for this hotel that can be used with the proper hotel reservation form. This form has been distributed to potential participants, but it is also available for download on The Cone Collector website.

Of course, there are many other alternatives for accommodation in Madrid. We show here some alternatives in different price ranges that are also in close proximity (walking distance) to the Museum. For their location in central Madrid, please see the map. Prices quoted are per night and correspond to internet offers for a double room only (i.e. no breakfast included). If you are interested in any of these (or other) hotels, you may negotiate for a better rate and book on your own.

1.- NH Abascal (4*) From 76 € (breakfast not included)

2.- NH Zurbano (3*) From 70 € (breakfast not included)

3.- Hesperia Madrid (5*)
From 139 € (breakfast not included)

4.- Hotel Miguel Angel (5*)
From 112 € (breakfast not included)

5.- NH Bretón (3*)From 67 € (breakfast not included)

6.- Hesperia Emperatriz (4*) From 70 € (breakfast not included)



How to get to the museum from the Holiday Inn hotel

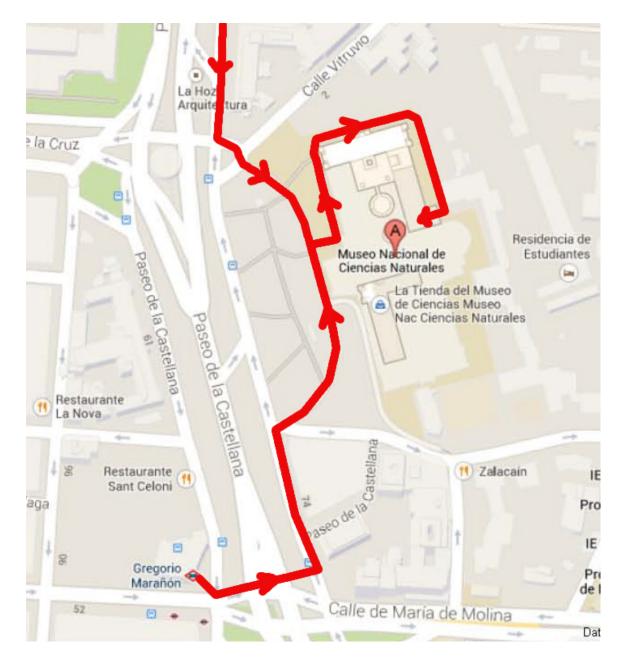
The museum is located 1.3 km from the Holiday Inn Hotel. This represents about a 15 minute walk, or you can take the metro at the Santiago Bernabeu station (Line 10) and get off at the Gregorio Marañón station (2 stops, or about a 5 minute walk).

See the following maps for walking routes from the hotel to the museum, and from the metro station Gregorio Marañón to the museum.

Cone meeting participants will need to use a different door than visitors to the museum. The meeting reception desk will not be through the main entrance (i.e. for visitors), but from the back door (access to the CSIC facilities). Meeting attendees should walk on the path surrounding the museum (on its left) to get to the door, where the registration desk will be opened. Again, see the maps below for directions.



From Holiday Inn Hotel to Museum



From Metro Gregorio Marañón to the Museum

See you in Madrid!