



SIRATUS

Conquiliologistas do Brasil

Ano/Year 3 • Fevereiro/February 1998 • nº 14



Stenorytis pernobilis

Editorial

Como havíamos prometido, a *Siratus* está sendo publicada novamente, sem a periodicidade definida. Neste número tivemos a inestimável contribuição de Willian P. Cargile com a descrição de dois *Conus* da província Caribenha. Paulo Márcio Lemos Couto e Renata dos Santos Gomes contribuíram com um trabalho apoiado pelo CAPES, Órgão de apoio à pesquisa do Governo Brasileiro e mais um trabalho de seu editor sobre duas espécies novas de Volutidae.

A partir deste número estaremos aceitando contribuições de artigos estritamente de caráter científico para novos números. Havendo interesse de envio, os artigos deverão seguir o padrão feito neste número, caso seja para descrição de novas espécies.

Outros artigos, como comparação de espécies, distribuição de fauna ou anatomia, com ilustrações e mapas são muito bem-vindos. Pede-se bibliografia completa e dados biográficos dos autores.

Esperamos poder ampliar o espaço reservado ao desenvolvimento da Malacologia.

As we have promised, the *Siratus* is being published again, but it still with no periodical publishing decided. In this edition we had an special contribution of Willian P. Cargile: the description of two *Conus* from Caribbean Province. Paulo Márcio Lemos Couto and Renata dos Santos Gomes contributed with a work supported by CAPES, an Brazilian official organ to support researches. And another work from the magazine's editor about two new species of Volutidae.

From now on we are accepting scientific articles only to be integrated in new editions. If you get interested, the articles must have the same layout of this edition, if it's to describe new species.

Another articles, species being compared, anatomy, with illustrations, maps etc. are very welcome. Complete bibliography and authors bibliographic data are essential

We hope we can amplify the reserved space to malacology development.

José Coltro Júnior
Editor

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Fotos: Capa e Contra-capas
Cover photos

***Sthenorytis pernobilis* Fischer & Bernardi, 1857**

Fotos/photos: Marcus Vinicius Coltro

ISSN 0103 - 5606

Siratus é uma publicação ocasional dos Conquiliologistas do Brasil, sociedade sediada na Rua Miguel Telles Jr., 53, CEP 01540-040, São Paulo, SP, Brasil. Pedidos de exemplares, artigos e cartas devem ser enviadas para a caixa postal 15011 CEP 01599-970, São Paulo - SP. Nosso telefone é (011) 279.9482 e FAX (011) 278.8979 E-mail: femorale@br.homesshopping.com.br

Siratus is an occasional publication of Conquiliologistas do Brasil, located at Rua Miguel Telles Jr., 53, CEP 01540-040, São Paulo, SP, Brasil. Requests for issues, articles and letters should be sent to P. O. Box 15011, São Paulo SP Brazil 01599-970, and our telephone number is (0055 11) 279.9482 and FAX (0055 11) 278.8979. E-mail: femorale@br.homesshopping.com.br

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Preço por exemplar Price by issue	
Brasil (via aérea)	R\$ 7,50
South America (air mail)	US\$ 6,50
North and Central America (air mail)	US\$ 7,00
Europe	US\$ 7,50
Asia, Africa and Oceania	US\$ 8,50

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Two New *Scaphella* (Gastropoda, Volutidae) from Caribbean Province

José Coltro Jr.

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Abstract:

Two new species from deep water Caribbean Province were found. *Scaphella worki* sp.nov. is a deep-water species found in the borders of Mississippi Fan, off Louisiana, USA. *Scaphella luizcouthoi* sp.nov. is a very outstanding deep-water species found at Mouchoir Passage, off Grand Turk Island, south Bahamas.

Keywords:

Gastropoda, Volutidae, Louisiana, Turks and Caicos Islands, *Scaphella luizcouthoi* sp.nov., *Scaphella worki* sp.nov.

Introduction:

In a very large lot of *Scaphella* dredged and trawled in the Caribbean Province two new species were found. The shells that belong to the Genus *Scaphella* are small to medium in size (20 to 130 mm) (Weaver & duPont, 1970), fusiform and solid. Protoconch is large, papilliform and smooth. Columella has several plaits, normally very fine and small.

The Genus is restricted to the Caribbean Province. Most species are found in the Gulf of Mexico, Cuba and eastern Florida. *Scaphella evelinae* Bayer, 1971 is found in the southwestern part of the Caribbean Sea and *Scaphella neptunia* (Clench & Aguayo, 1940) is a deep-water species found southern Jamaica. Weaver and duPont (1970) considered 4 valid species in the Genus *Scaphella*; Abbott (1974) 7 species; and Poppe and Goto (1992) 9 species and 2 sub-species.

Scaphella worki sp.nov. is found in Gulf of Mexico, but *Scaphella luizcouthoi* sp.nov. extends the range of the Genus eastward as this species lives in the Turks and Caicos area.

Abbreviations:

MORG: Museu Oceanografico Prof. E.C. Rios, Rio Grande, R.S., Brasil.

MZUSP: Museu de Zoologia da Universidade de São Paulo, Brasil.

Family Volutidae Rafinesque, 1815
 Subfamily SCAPHELLINAE H. & A. Adams, 1858
 Genus *Scaphella* Swainson, 1832

Scaphella luizcouthoi sp.nov.
 (Figs. 1-4)

Type Material:

HOLOTYPE: MORG 39.295 (36.4 by 16.7mm); PARATYPE 1: MZUSP 28.790 (18.5 by 9.5mm); PARATYPE 2 and 3: Coltro coll. (26.0 by 13.3mm and 33.5 by 15.5mm). Known only the types.

Type Locality:

Mouchoir Passage, southeast Turks and Caicos Islands. Dredged at 225-250 fathoms.

Description:

Shell small for the genus with approximately 4 whorls. Somewhat inflated, fusiform and solid. Color white with cream zigzag patterns. Protoconch large and papilliform, of 2° whorls in white color. Teleoconch and body with very fine sculpture, looking almost smooth. Four very fine weak plaits in the columella. Outer lip thin. Aperture white, large and elongated, about 74% of the shell.

Animal and radula:

Unknown.

Distribution:

Known only from the Type Locality.

Discussion:

None of the *Scaphella* described has the shape of *S. luizcouthoi* sp.nov.. *Scaphella neptunia* (Clench & Aguayo, 1960) is the closest species, especially if compare the protoconch. *S. neptunia* has a very elongated body, reddish-brown bands and 3 weak plaits in the columella. Weaver & du Pont (1970) considered this species may be a local population of *S. junonia* (Lamarck, 1804). Abbott (1974) considered it a sub-species of *S. dubia* (Broderip, 1827). And Poppe & Goto (1992) didn't consider it as a valid species. *S. luizcouthoi* sp.nov. is a very distinct species and there is few chance to be a sub-species or a local population of any other *Scaphella* species.

Etymology:

This species is named after Luiz Marcio Lemos Couto, from Guarapari, Brasil.

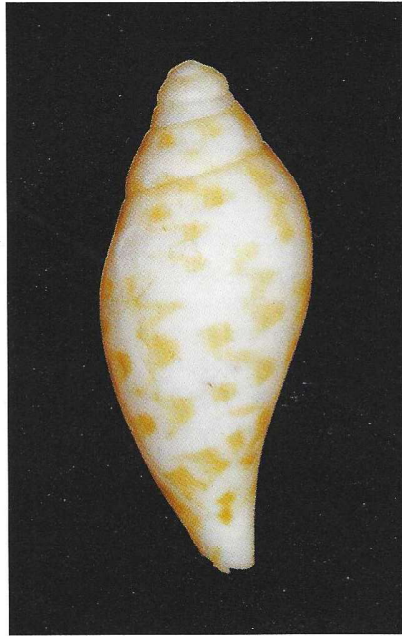


Fig. 1: *Scaphella luizcouthi*, Mouchoir Passage, 36.4 x 16.7 mm - HOLOTYPE, dorsal view

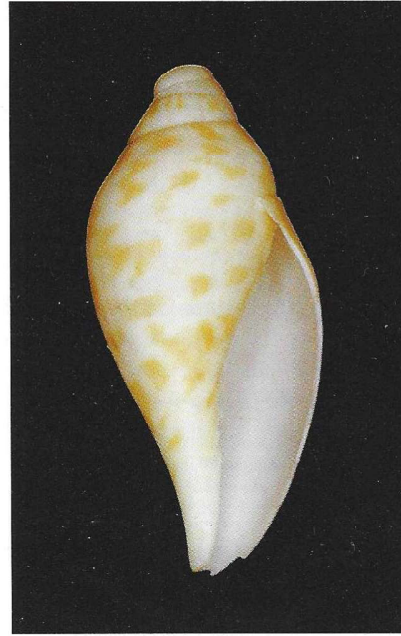


Fig. 2: *Scaphella luizcouthi*, Mouchoir Passage, 36.4 x 16.7 mm - HOLOTYPE, ventral view



Fig. 3: *Scaphella luizcouthi*, Mouchoir Passage - PARATYPES (left to right - 18.5 x 9.5 mm; 26.0 x 13.3 mm; 33.5 x 15.5 mm)

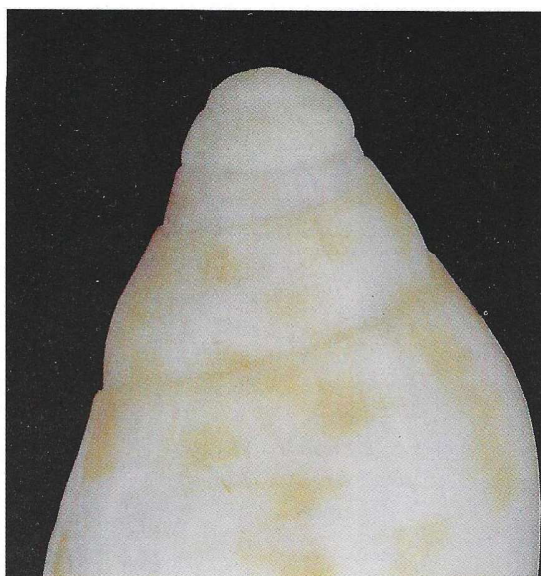
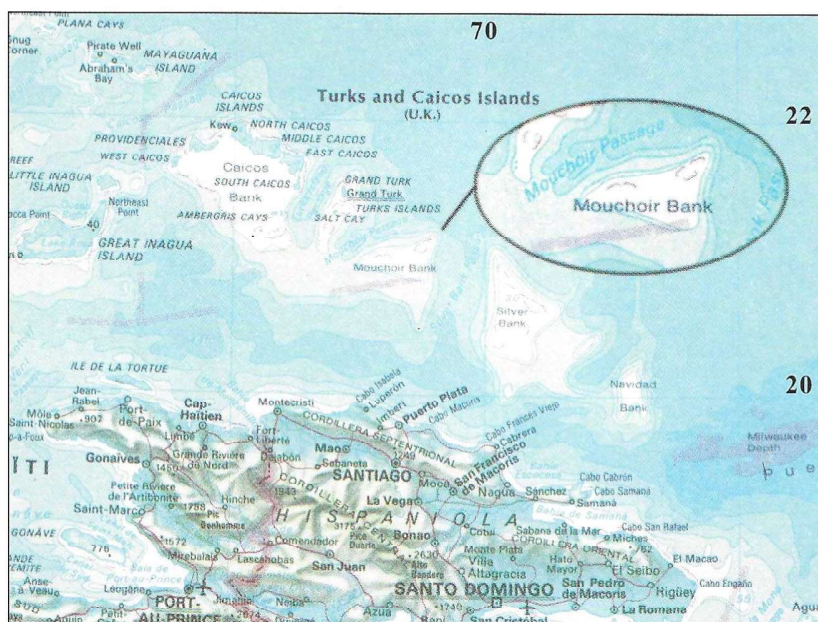


Fig. 4: *Scaphella luzcouthi*, spire details.



Scaphella luzcouthi sp.nov. - **Distribution**

Scaphella worki sp.nov.
 (Fig.5-9)

Type material:

HOLOTYPE: MORG 39.296 (44.6 by 19mm); PARATYPE 1: MZUSP 28.791 (54.6 by 20mm); PARATYPE 2: R.Work coll. (56.0 by 21.9mm). Known only 6 specimens.

Type Locality:

Mississippi Fan, Gulf of Mexico, off Louisiana, USA.
 Dredged at 200-250 fathoms.

Description:

Shell small for the genus with approximately 5 or 6 whorls. Very elongated, fusiform and solid. Color pale cream with regular square brown spots. Protoconch large and smooth. Teleoconch sculptured with axial costae. Body with very fine spiral striae and nodules on the shoulder. Aperture elliptical, large and elongated, about 68% the shell. Columella with 3 very small and fine weak plaits. Outer lip thin.

Animal and radula:

Unknown.

Distribution:

Known only from the Type Locality.

Discussion:

At first *Scaphella worki* sp.nov. may look close to *Scaphella robusta* (Dall, 1889). Both shells have nodules on the shoulder and very fine spiral striae on the whorl. But *S. robusta* is a very large species (fig.10), fusiform with elongated aperture.

Differs from *S. worki* sp.nov. in the shape of the shell and the elliptical aperture. *S. robusta* is much more inflated if compared with *S. worki* sp.nov. *Scaphella dohrni* (Sowerby, 1903) and *S. gouldiana* (Dall, 1887) has nodules on the shoulder, but both the species differ in shape and shell characteristics.

Etymology:

This species is named after Robert Work, from Miami, Florida for his great collaboration to the marine life studies.

Acknowledgments:

I thank to my brother Marcus for his help with the photography. To Paulino J.S. de Souza Jr., for his criticisms on the draft manuscript. And a special thank to Robert Work and William P.Cargile, without them this work would not be possible.

References:

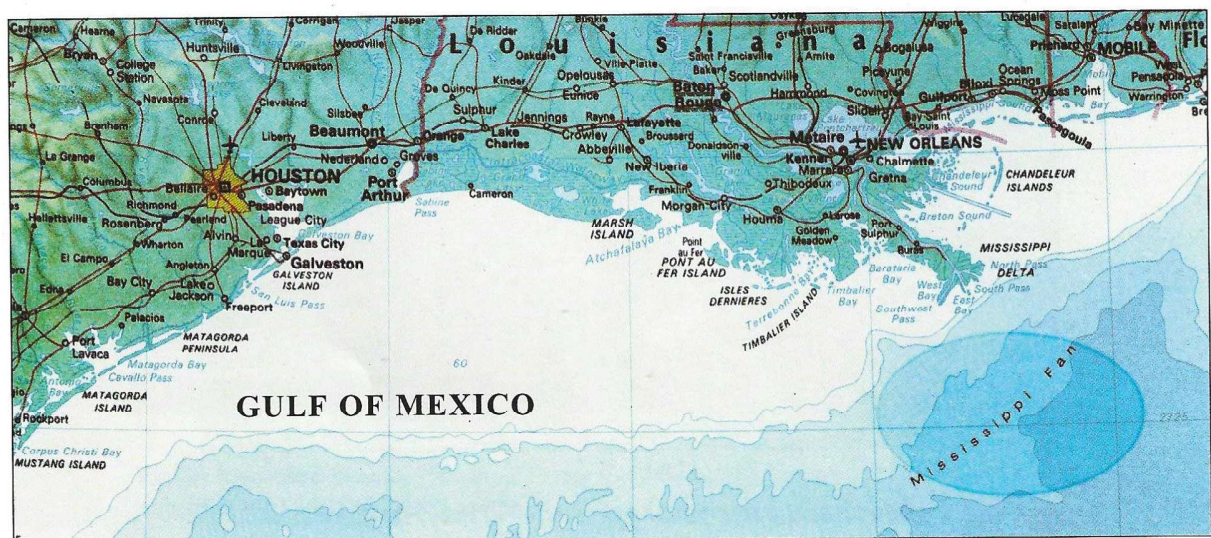
Abbott, R.T., 1974, *American Seashells*, Second Edition, New York, 663 pg.

Clench, W.J., 1946, The Genera *Bathyaurnia*, *Rehderia* and *Scaphella* in the Western Atlantic, *Johnsonia*, vol.2. No.22, pg.41-60.

Clench, W.J., 1953, The Genera *Scaphella* and *Auriniopsis* in the Western Atlantic, *Johnsonia*, vol.2. No.32, pg.376-380.

Poppe, G.T. & Goto, Y., 1992, *Volutes*, Ancona, Italia, 348 pg.

Weaver, C.S. & duPont, J.E., 1970, *Living Volutes - A Monograph of the Recent Volutidae of the World*, Delaware Museum of Natural History, 375 pg..



Scaphella worki sp.nov. - Distribution



Fig. 5: *Scaphella worki*, Mississippi Fan, 44.6 x 19.0 mm - HOLOTYPE, dorsal view



Fig. 6: *Scaphella worki*, Mississippi Fan, 44.6 x 19.0 mm - HOLOTYPE, ventral view



Fig. 7: *Scaphella worki* (left) x *Scaphella robusta* - juvenile specimen (right) - Dorsal view



Fig. 8: *Scaphella worki* (left) x *Scaphella robusta* - juvenile specimen (right) - Ventral view

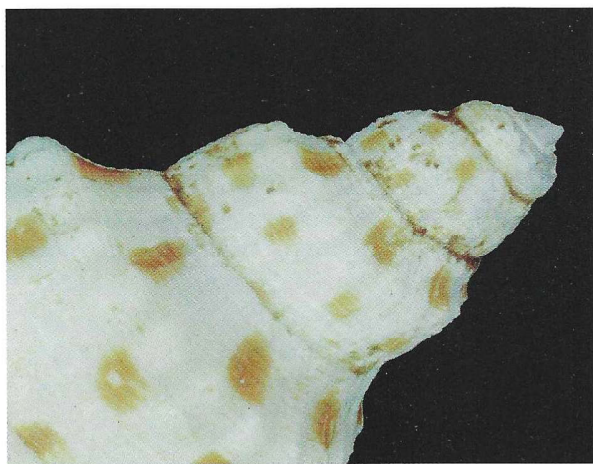


Fig. 9: *Scaphella worki*, spire detail.

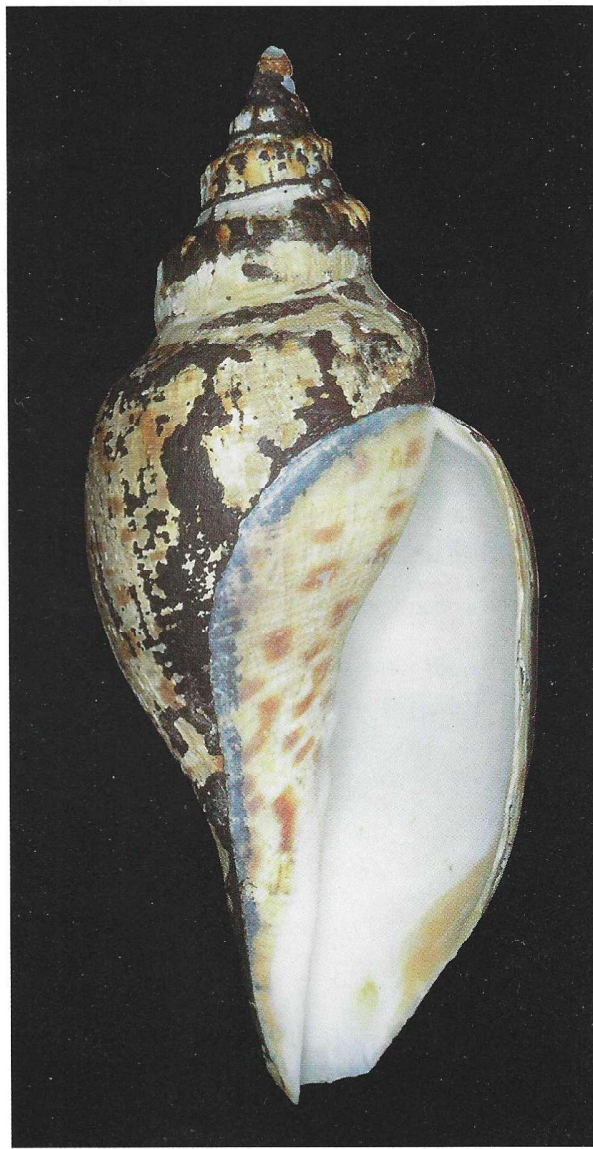


Fig. 10: *Scaphella robusta* (Dall, 1889), off Pensacola, Florida, 121.2 mm.

Description of *Conus ignotus*, a new species from Nicaragua

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Abstract:

A recent discovered *Conus* from offshore eastern Nicaragua is described and compared to *C. binghamae* Petuch, 1987; *C. eversoni* Petuch, 1987; and *C. patae* Abbott, 1971.

Keywords:

Gastropoda, Conidae, *Conus ignotus*, Western Atlantic.

Introduction:

This is one of several new species of *Conus* that have been collected in recent years by fishermen working the offshore banks east of Central America. Typically, the fisherman have been reluctant to disclose accurate locality data and habitat, and unfortunately, soft parts are not preserved. After two years of occasional findings, today we still know very little of the provenance of these shells. Until live material is available with habitat data, we must describe the species on the basis of shell characters only.

Abbreviations:

SBMNH: Santa Barbara Museum of Natural History.

WPC: William P. Cargile collection.

Family CONIDAE Rafinesque, 1815
 Genus *Conus* Linnaeus, 1758

Conus ignotus sp. nov.
 (Figs. 1-4, Table 1)

Type Material:

HOLOTYPE: SBMNH 144522 (20.6 x 10.5 mm);
 PARATYPE 1: WPC (22.6 x 11.2 mm); PARATYPE 2: WPC (20.0 x 10.8 mm); PARATYPE 3: WPC (19.5 x 10.1 mm); PARATYPE 4: (19.3 x 9.5 mm); PARATYPE 5: SBMNH 144523 (19.0 x 9.2 mm); PARATYPE 6: WPC (18.6 x 9.1 mm); PARATYPE 7: WPC (17.4 x 8.3 mm); PARATYPE 8: WPC (15.8 x 7.9 mm); PARATYPE 9: WPC (18.2 x 9.0 mm); PARATYPE 10: WPC (17.3 x 8.8 mm); PARATYPE 11: WPC (16.7 x 8.3 mm); PARATYPE 12: WPC (17.1 x 9.0 mm).

Type Locality:

West side of Quita Sueño Bank (14°20'N, 81°10'W) at

25-35 meters depth.

Description:

The shell (Fig. 1) is conical, small in size for the genus (length: 15 to 23 mm), and light in weight. The last whorl (Relative Diameter: 0.56 to 0.60) has sides that are slightly rounded in the region between the angulate shoulder and the Position of Maximum Diameter (0.85 to 0.95), and are quite straight below the PMD. The surface is smooth and glossy with regular light ribbing on the anterior third, continuing to the shoulder on some juvenile specimens. The aperture width is approximately 0.08 times the aperture height, and slightly widens anteriorly. The lip is thin, with a straight axial profile, and the anal notch is slightly deeper than the aperture is wide. The spire is low (Relative Spire Height = Length/Aperture-1: 0.11 to 0.19), and below the protoconch, is straight in outline. The sutural ramps are decorated with 4 to 5 fine spiral striae, are flat, and are aligned with the spire outline such that the sutures are barely visible, except for the occasional slight step at the penultimate whorl. The slightly projecting apex (Fig. 4b) has an 0.8 mm diameter protoconch of 1.25 smooth nuclear whorls, and is followed by seven teleoconch whorls. The columella is visible only at the tip of the base.

The substrate color of the body whorl is purple, mauve, violet, or pinkish orange, and may be overlaid with very pale brown blotches and white clouds aligned in indistinct spiral bands near midbody, and may be more or less covered with widely spaced minute brown dots or dashes in spiral rows. By contrast, however, the apex of the spire and following 3 to 5 teleoconch whorls invariably are colored a bright greenish yellow, and this is an important differentiating character for the species. Later spire whorls may be decorated with a few brown, widely spaced radial crescents. The aperture shares the same color as the body whorl, becoming violet or purple deeper inside.

The periostracum is very thin and transparent; the operculum is not known at this time.

Animal and radula:

Unknown

Distribution:

The presently known range of *C. ignotus* sp. nov.

includes only the Type Locality. The cones are found in fish and lobster traps that are inadvertently dragged by fishermen while raising them, so the shells are effectively "dredged" (Bruno Besse, personal communication).

Discussion:

C. ignotus sp.nov. may be compared with the non-rugose form (Fig.2: row 1c, f) of *C. patae* Abbott, which, although lacking the typical axial wrinkles, still has well defined, narrow, widely spaced ridges over the body whorl. The spiral sculpture on the ribbed form (Fig.2: row 4) of *C. ignotus* sp.nov., by contrast, is shallow and closely spaced, and is not found on adult specimens. *C. patae* has a noticeable lower PMD (Fig.2 and Table 1), a more extended protoconch of 2 nuclear whorls, a concave spire profile, and lacks the distinct greenish-yellow apex (Fig.4b) of the new species.

C. eversoni Petuch is likewise differentiated by its white apex (Fig. 4c) and extended protoconch of 2 nuclear whorls. The Relative Diameter (Table 1) of *C. eversoni* is smaller; its range of variation not overlapping that of *C. ignotus* sp.nov. The PMD of *C. eversoni* is also lower, and body whorl sculpture (Fig. 3c), when present, is more widely spaced.

The shell characters and metrics noted above are not so useful in separating the new species from *C. binghamae* Petuch, a Florida endemic, even though in gross appearance, it is the least similar of the compared species (Figs. 2,4). The consistent pyriform aspect of the body whorl, more angulate shoulder, and non-overlapping range of variation in Relative Spire Height (Table 1) of *C. binghamae* are notable. Less obvious but still useful differences include the relatively rude sutures, and slightly stepped spire profile. The substrate of *C. binghamae* is white, overlaid with color pattern; that of *C. ignotus* sp.nov. is anything but white.

Etymology:

At the present time, the exact locality, habitat, and many important animal characteristics of this *Conus* remain unknown. And therefore, the name is "unknown".

Acknowledgements:

The author wishes to thank Bruno Besse of Roatan, Honduras, who supplied type material and encouragement. Bruno actively dives, traps, and obtains from fishermen much interesting material and has contributed to science many new species of mollusks.

References:

Abbott, R.T., 1971, *Conus patae*, a New Caribbean Gastropod. *The Nautilus*, vol.85, no.2, pg.49.

Petuch, E.J., 1987, *New Caribbean Molluscan Faunas*. CERF, 158 pp.

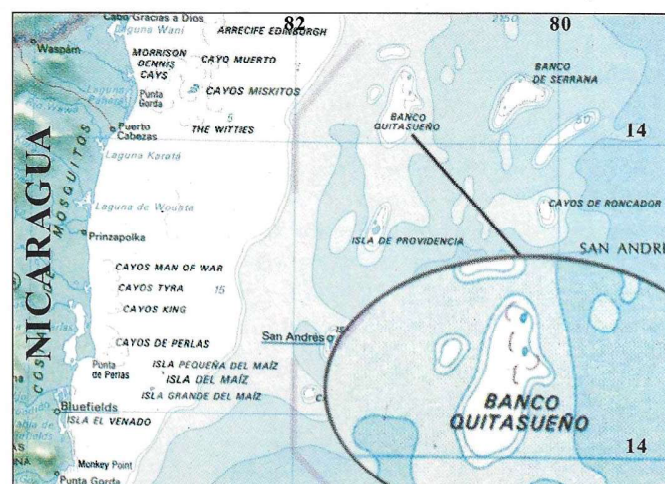


Table 1
Summary of Morphometric Analysis

SPECIES	N	L	D	A	D/A	L/A-I	PMD
<i>C. ignotus</i>	14	15.8-22.6 18.4	7.9-11.2 9.2	13.3-20.1 15.9	0.56-0.60 0.58	0.11-0.19 0.15	0.91
<i>C. patae</i>	24	16.3-26.9 21.5	8.9-14.8 11.4	14.1-24.0 18.7	0.55-0.66 0.61	0.11-0.19 0.15	0.88
<i>C. eversoni</i>	11	16.3-22.4 18.9	7.4-10.1 8.5	14.4-19.3 16.3	0.49-0.54 0.52	0.11-0.20 0.15	0.85
<i>C. binghamae</i>	5	18.1-21.7 19.7	8.9-10.8 9.8	15.0-18.1 16.4	0.58-0.62 0.59	0.19-0.22 0.20	0.91

N: Number of shells measured; L: Length in mm; D: Maximum diameter in mm; A: Aperture Height in mm; D/A: Relative diameter; L/A-I: Relative Spire Height; PMD: Position of maximum diameter

Note: Not enough material was available for this analysis to be statistically valid.



Fig. 1: top: *C. ignotus*, Quita Sueño Bk., 22.6 x 11.2 mm, PARATYPE I, coll. W.P. Cargile; bottom: *C. ignotus*, Quita Sueño Bk., 20.6 x 10.5 mm, HOLOTYPE, SBMNH.



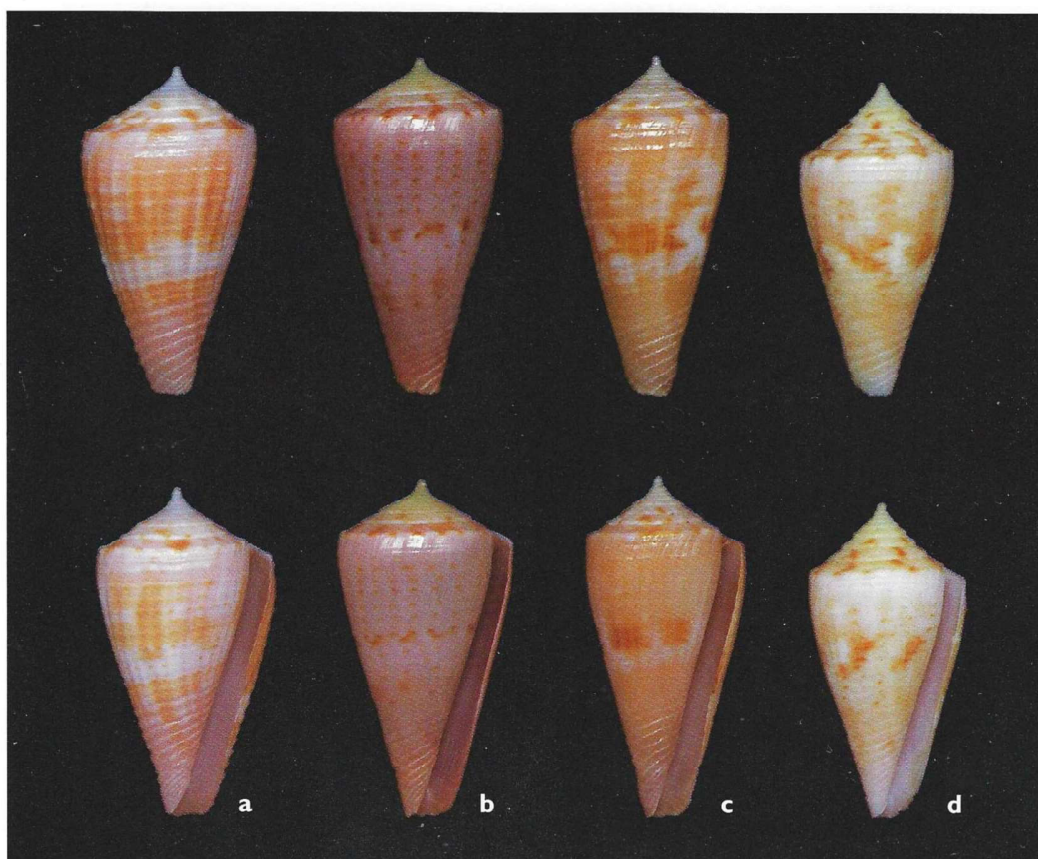


Fig.3: Comparison. **a.** *C. patae*, Turks & Caicos, 19.0 x 10.3 mm; **b.** *C. ignotus*, Quita Sueño, 19.5 x 10.1 mm; **c.** *C. eversoni*, Honduras, 19.7 x 9.1 mm; **d.** *C. binghamae*, Florida, 18.1 x 8.9 mm.

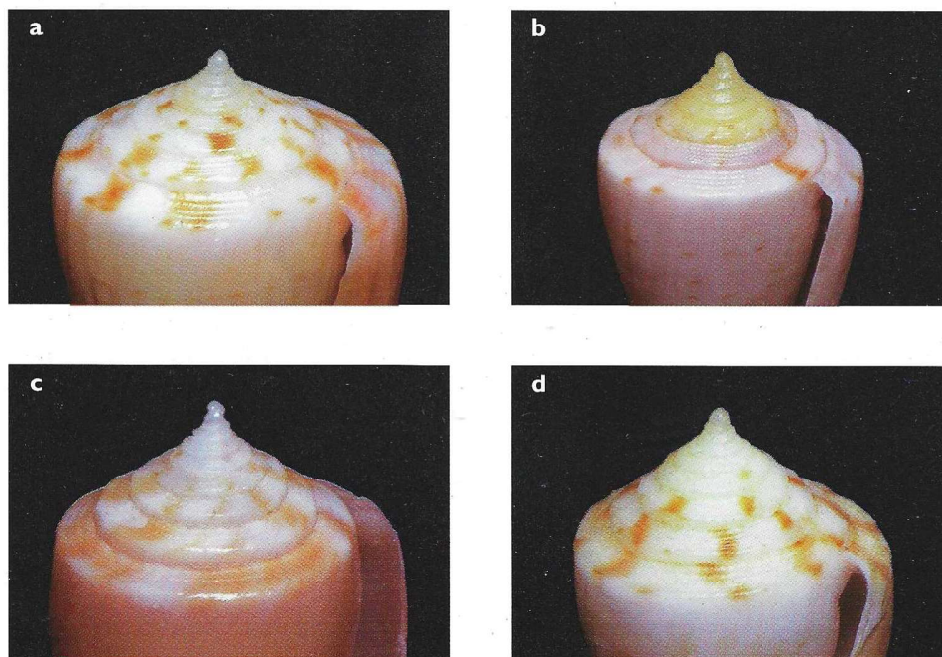


Fig.4: Comparison of spire details. **a.** *C. patae*; **b.** *C. ignotus*; **c.** *C. eversoni*; **d.** *C. binghamae*

A new Species of *Pisania* Bivona, 1832 (Mollusca, Gastropoda, Prosobranchia) to Brazilian coast

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 Renata dos Santos Gomes*

* Laboratório de Malacologia, Dep. de Zoologia, Instituto de Biologia - C.C.S.,
 Universidade Federal do Rio de Janeiro
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Abstract:

The family Buccinidae Rafinesque, 1815 has fourteen species in the Brazilian coast (RIOS 1994), three of them in the genus *Pisania* Bivona, 1832: *Pisania auritula* (Link, 1807), *Pisania pusio* (Linnaeus, 1758) and *Pisania tinctoria* (Conrad, 1846). In the last years no revision including West Atlantic *Pisania* was done. Cernohorsky (1975), in his study about the taxonomy of the species in the subfamily Pisaninae, didn't mention the Atlantic species and used conchiliology characters in order to distinguish some genus of Pisaninae. *P. pusio*, *P. auritula* and *P. tinctoria*, all species collected in Caribbean, had their radula illustrated in Bandel (1984). This study presents a new species of *Pisania* collected between the cities of Salvador, Bahia State and Guarapari, Espírito Santo State, in the East Brazilian seashore, 20-30 m depth. The description was based on shell and radular characters.

Keywords:

Gastropoda, Buccinidae, *Pisania bernardoi* sp. nov.

Introduction:

Columella regularly concave, parietal wall smooth and with a denticle near the anal canal, lower half of columella either completely smooth or with half a dozen denticles as in *P. striata* (Gmelin, 1791) or *P. pusio* (Linnaeus, 1758). Adult specimens with a raised, almost vertical calloused columella ledge which terminates on reaching the smooth, thinly glazed or weakly calloused parietal wall. The interior ledge of the columella lacks the swelling of *Engina* and the protrusion of *Cantharus* and is replaced by only a slightly projectin terminal denticles. Outer lip with small, distinct and numerous denticles which become lirate within the aperture, anal notch distinct (Cernohorsky, 1975).

Pisania Bivona, 1832. Effem. Sci. Lett. Sicil. Palermo 2: 8. Type species *P. striatula* Bivona, 1832 = *Voluta striata* Gmelin, 1791. Recent, Mediterranean.

Proboscidea Schmidt, 1832 (in Möeller). Isis. col. 131. Type species *P. ignea* = *Buccinum igneum* Gmelin, 1791. Recent Indo-Pacific.

Ecmanis Gistel, 1848. Nat. Thierr. Schulen, p.10. Type species *Buccinum igneum* Gmelin, 1791 [nom. subst. pro *Proboscidea* Schmidt, 1832 (in Möeller)].

Poliana Gray E. M., 1850. Figs. Moll. Anim. 5: 67.

Taeniola Dall, 1904. Smiths. Misc. coll. 47: 137. Type species by OD *Triton decollatus* Sowerby, 1833. Recent, Pacific.

Appisania Thiele, 1929. Handb. Syst. Weicht. P. 314. Type species *Metula (Appisania) Montrouzieri* Crosse, 1862 = *Buccinum fasciculatum* Reeve, 1846. Recent Indo-Pacific.

Sukunaia Cernohorsky, 1966. Veliger, 9 (2): 229. Type species by OD *S. jenningsi* Cernohorsky, 1966. Recent Pacific.

Abbreviations:

MORG - Museu Oceanográfico Prof. E. de C. Rios, Rio Grande, Brasil

MNRJ - Museu Nacional, Rio de Janeiro, Brasil

MZUSP - Museu de Zoologia de São Paulo, Brasil

USNM, National Museum of Natural History, Washington

MNHN - Muséum National d' Histoire Naturelle, Paris

IBUFRJ - Instituto de Biologia da Universidade Federal do Rio de Janeiro, Brasil.

Family BUCCINIDAE Rafinesque, 1815

Subfamily PISANIINAE Gray, 1857

Genus *Pisania* Bivona, 1832

Pisania bernardoi sp. nov.
 (Figs. 1-4; Table 1)

Type Material:

HOLOTYPE: MORG 39.006; 15,6 mm length; 6,5 mm width; Salvador, Bahia, collected alive, under rocks by Bernardo Linhares. PARATYPES: 1- MNRJ 7163, 19,3 mm length, 7,6 mm width; Off Guarapari - Espírito Santo, Brasil, Alfredo Bodart, 1993; 2- MZUSP 28.196, 13,55 mm length, 5,8 mm width; Off Guarapari - Espírito Santo, Brasil, Alfredo Bodart, 1993; 3- USNM, 15,0 mm length, 6,4 mm width; Off Guarapari - Espírito Santo, Brasil, Alfredo Bodart, 1993; 4- MNHN Type Collection, 15,0 mm length, 6,5 mm width; Off Guarapari - Espírito Santo,

Brasil, Alfredo Bodart, 1993; 5- IBUFRJ 6786, 19.6 mm length, 8.4mm width; Off Guarapari - Espírito Santo, Brasil, Alfredo Bodart, 1993.

Type locality:

Continental slope off the coast of Salvador - Bahia State, Brazil.

Description:

Shell (figs. 1, 2; table 1) fusiform, solid, reaching 19.6mm in length and 8.4mm in width. Teleoconch with 5.25 shouldered whorls (holotype). Espire measures approximately 1/3 of the total height of the shell, spire angle of 40°. Aperture oval, porcelainous white, measures 1/4 of the total height of the shell. Suture well impressed. Inner side of outer lip with approximately 13 denticles which become lirate within the aperture, the two posterior and the anterior one bigger than the others, anal notch distinct. Columella smooth, concave, with a terminal keel. Parietal wall smooth with one tooth in the posterior region, near the anal canal. Siphonal canal short, open. Outer lip thickened resulting in a strong varix. Operculum corneous, oval, yellowish, with a subterminal nucleus closing the aperture. Protoconch (fig. 3) globose, smooth, paucispiral, with 1 1/2 whorls and has a diameter of 0.45 mm. Limit between protoconch and teleoconch distinct. First whorls of teleoconch sculptured with axial ribs crossed by spiral cords, resulting nodules in intersections, body whorl sculptured with strong and weak alternating spiral lines (19 and 17 respectively, in the holotype). Color dark brown to light brown with irregular white spots. Protoconch shine brown. Periostracum thinner, yellowish-brown.

Radula:

Rachiglossate, central tooth subquadrate with five cusps. The three central cusps are equal in size and longer than the lateral cusps. The marginal tooth has three cusps inclined towards the central part of radular row. The outermost cusp is longer than the others. The central cusp measures 2/3 of the height of the outermost cusp and is more slender. The innermost cusp is slightly longer and three to four times larger than the central cusp and with three denticles on the inner face. (Fig. 4)

Distribution:

Central Brazilian Coast, from southern Espírito Santo State to north Bahia State.

Discussion:

P. bernardoi sp.nov. can be distinguished from *P. pusio* because of its small size reaching 19 mm, while *P. pusio* has 34 mm height. *P. bernardoi* sp.nov. has the body whorl with a sculpture pattern consisting of alternate weak and strong spiral lines and color pattern consisting of irregular white spots in a dark brown background, while *P. pusio* has the body whorl smooth and color pattern consisting of dark brown spiral bands in the light brown background and a narrow

white band on the body whorl. In *P. bernardoi* sp.nov. the inner lip is smooth and *P. pusio* has lower columellar denticles. In *P. bernardoi* sp.nov. the protoconch is higher and has greater diameter than in *P. pusio*. The radula of both species are similar but in *P. bernardoi* sp.nov. the innermost cusp of the lateral tooth has three denticles in the inner margin, while *P. pusio* has the inner margin of the innermost cusp smooth.

According to Cernohorsky (1975), *P. auritula* e *P. tincta*, allocated by Abbott (1974) and Rios (1994) in the genus *Pisania*, must be reallocated in the genus *Cantharus* Röding, 1798, subgenus *Polia* Gray, 1834 because of the following conchilological characters: "columella concave but projecting anteriorly, calloused, callus usually thinned on the parietal wall where the intruding spiral sculpture of the body whorl is usually visible, columella sculptured with a few or numerous denticles. Anal canal distinct and flanked by a parietal and anal denticle, outerlip with 7-15 denticles which usually extend partly into the aperture. The anterior inner ledge of the columella is convex and projecting and is preceded by a prominent or shallow oblique groove" (Cernohorsky, 1975).

Etmology:

This species is named in honor to Bernardo Linhares a shell collector at Salvador, Bahia state who has been collected in numerous interesting species in this region.

Acknowledgements:

This work would not be possible if it had not for the support of José Coltro Jr., Marcus Coltro, Luís Márcio Lemos Couto, Bernardo Linhares, Alfredo Bodart e Carlos Lira who contributed with some specimens herein studied. We are so grateful to Dr. Ricardo Absalão and Alexandre Dias Pimenta who provided useful insights. This work was partially funded by CAPES.

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- Rios, E. C. 1994. *Seashells of Brazil*. 2ª ed., Fundação da Universidade do Rio Grande, Rio Grande. 368 p., 113 pls.

Table I	Hol.	Par. 1	Par. 2	Par. 3	Par. 4	Par. 5
Total length (mm)	15.60	19.30	13.55	15.00	15.00	13.00
Shell width (mm)	6.50	7.60	5.80	6.40	6.50	5.70
Length/width	2.40	2.54	2.33	2.34	2.30	2.28
Aperture Length (mm)	5.30	6.35	4.80	4.40	5.20	3.90
Aperture width (mm)	2.70	2.80	2.35	2.40	2.60	1.90
Protoconch wholrs	1.50	broken	1.50	1.50	1.50	broken
Teleoconch wholrs	5.00	5.50	4.50	5.50	5.25	4.50

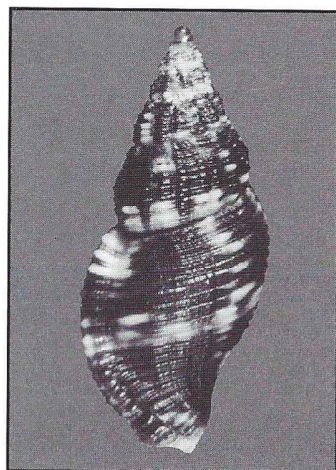


Fig. 1: *Pisania bernardoi* sp.nov., Holotype; 15.6 mm length - dorsal view.

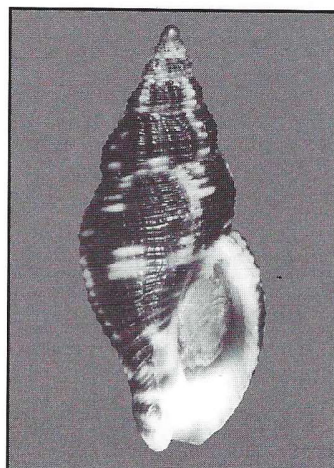


Fig. 2: *Pisania bernardoi* sp.nov., Holotype; 15.6 mm length - ventral view.

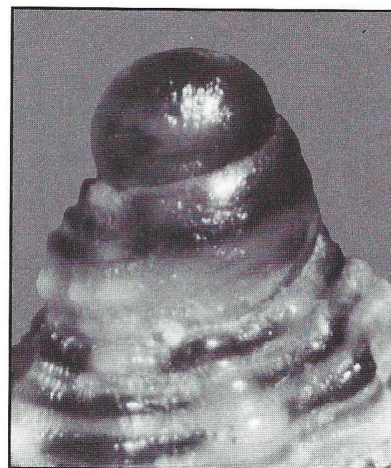


Fig. 3: *Pisania bernardoi* sp.nov., protoconch.



Fig. 4: *Pisania bernardoi* sp.nov., radula



Distribution area 

Description of *Conus lenhilli*, a new species from the Western Atlantic

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Abstract:

A recently noted *Conus*, dredged from the Western Atlantic in 1965, is described and compared to *C. helgae* Blöcher, 1992

Keywords:

Gastropoda, Conidae, *Conus lenhilli*, Western Atlantic

Introduction:

In February 1996, during a study and photography session at the home of the late Leonard C. Hill, a striking and undescribed species of *Conus* was brought forth. A single specimen had been obtained by Len from a very old collection of dredged material from the Western Atlantic. While Len was anxious to see this new species described, he had been unsuccessful in obtaining additional specimens that would be necessary for proper study and for type material, and had therefore postponed further work until this problem could be solved. At the time of Len's death in November 1997, the situation was unchanged. Immediately afterwards, the specimen here identified by photographs and designated Paratype no.6, unfortunately disappeared from Len's personal collection. More specimens were subsequently obtained by José Coltro Jr., which provide the basis for this description.

Abbreviations:

SBMNH: Santa Barbara Museum of Natural History, Santa Barbara, California, USA.

WPC: William P. Cargile collection.

LCH: Leonard C. Hill collection.

Family CONIDAE Rafinesque, 1815
Genus *Conus* Linnaeus, 1758

Conus lenhilli sp.nov.
(Figs. 1-4, 6)

Type Material:

HOLOTYPE: SBMNH 144485 (39.8 x 15.7 mm); PARATYPE 1:

WPC (41.3 x 16.5 mm); PARATYPE 2: WPC (38.0 x 15.0 mm); PARATYPE 3: WPC (37.1 x 14.8 mm); PARATYPE 4: WPC (31.5 x 12.3 mm); PARATYPE 5: WPC (30.3 x 11.5 mm); PARATYPE 6: LCH (36.2 x 14.7 mm); PARATYPE 7: SBMNH 144486 (27.6 x 11.1 mm); PARATYPE 8: WPC (33.4 x 13.4 mm); PARATYPE 9: WPC (37.9 x 15.7 mm); PARATYPE 10: WPC (35.4 x 14.5 mm).

Other Material Studied:

The rather unusual form of *C. mazei* shown in Figure 5 was found in the same location and habitat as *C. lenhilli* sp.nov..

Type Locality:

Mouchoir Bank, southeast of Turks and Caicos Islands (20°48'N, 70°46'W). Dredged at 440 meters depth on grey coral sand.

Description:

The shell (Fig. 1) is medium in size for the genus (Length: 25 to 40 mm) and moderately light in weight. The last whorl (Relative Diameter: 0.49 to 0.52) is conical with very straight sides, except for the anterior extremity on adult specimens being slightly but abruptly recurved dorsally and to the left (Fig. 2). The width of the aperture is uniform, approximately 0.09 times the aperture height. The lip is thin, with a straight axial profile, and the anal notch is as deep as the aperture is wide. The shoulder is subangulate, with 13 to 16 prominent smooth tubercles projecting radially outward and upward. The spire is moderate in height (Relative Spire Height = Length/Aperture-1: 0.24 to 0.32), and straight to slightly concave in outline, the latter interrupted by the projecting tubercles immediately above each suture. The slightly concave sutural ramps are aligned with the spire outline, and are decorated with 4 to 6 fine spiral striae, which disappear on later whorls. The moderately projecting apex (Fig. 2a) has a 1 mm diameter protoconch of two smooth nuclear whorls above six to eight teleoconch whorls. The last whorl (Position of Maximum Diameter: 0.95) is smooth and glossy with no spiral sculpture even at the base (Fig. 2b), and with hardly visible axial growth lines, excepting occasional rude ones. The columella is visible only at the tip of the base.

The color of the body whorl is white or cream, with occasional isolated small yellow or pale orange blotches below the shoulder or above the base, and on the spire.

The aperture is white, and translucent near the lip. The periostracum is very thin, yellow, and transparent.

Animal, operculum and radula:

The animal characteristics and operculum are not known, although some dried animal matter remained in the live taken specimens.

Distribution:

The presently known range is limited to the Type Locality.

Discussion:

The most distinctive characters of *C. lenhilli* sp.nov. are the radially projecting shoulder tubercles, and the body whorls with straight sides and no other spiral sculpture. While many *Conus* species have axially oriented shoulder tubercles, only a few share the radial orientation noted above, the more obvious being *C. helgae* Blöcher, 1992; *C. raoulensis* Powell, 1958; *C. sulcicastaneus* Kosuge, 1981; and some forms of *C. moluccensis* Küster, 1838 (Röckel, Korn & Kohn, 1995). All but the first of these differ radically from *C. lenhilli* sp.nov. in almost all other respects, and warrant no further discussion. Several "needle" *Conus* species also have radially projecting shoulder tubercles which are relatively small and closely spaced. Two forms of *C. mazei* Deshayes, 1874 that have this character and are not well illustrated in the literature, are shown in Fig.5.

The East African *C. helgae* (Fig.6) from deep water, deserves special attention because it has similar shoulder

tubercles, spire, and protoconch, but also has been found with straight, nearly smooth sides, and white color. Separation is not difficult, as it has fewer (9 to 10) and larger tubercles, a twisted anterior terminus, deep grooves on the sutural ramps, some spiral sculpture on the body whorl, greater Relative Diameter (0.56 to 0.59), lower Relative Spire Height (0.20 to 0.26), and lower PMD (0.91).

Etymology:

This species came to light through the efforts of the late Leonard C. Hill, whose integrity, warm friendship, keen sense of humor, and extensive knowledge of malacology will be remembered by all knew him.

Acknowledgements:

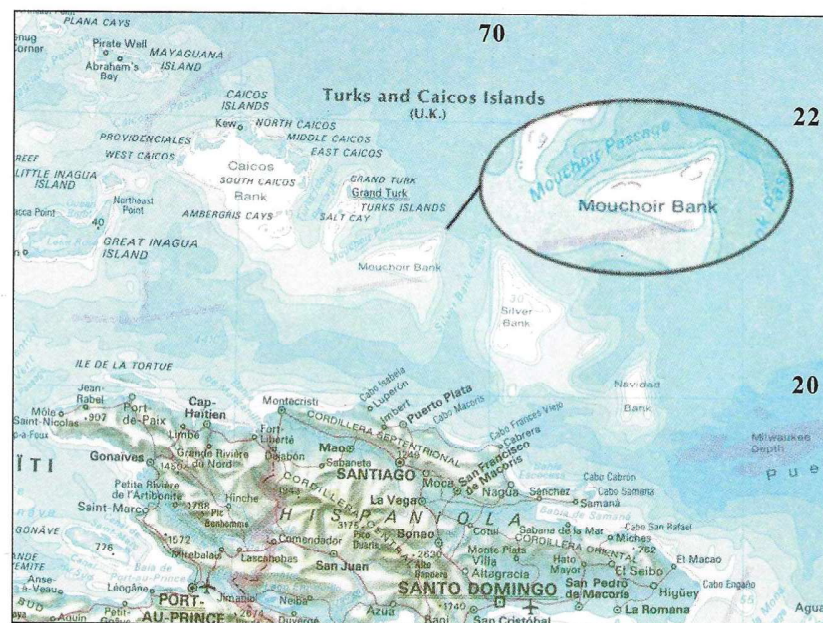
The author wishes to thank José Coltro Jr., who supplied type material, encouragement, and much critical review.

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Conus lenhilli sp.nov. - Distribution

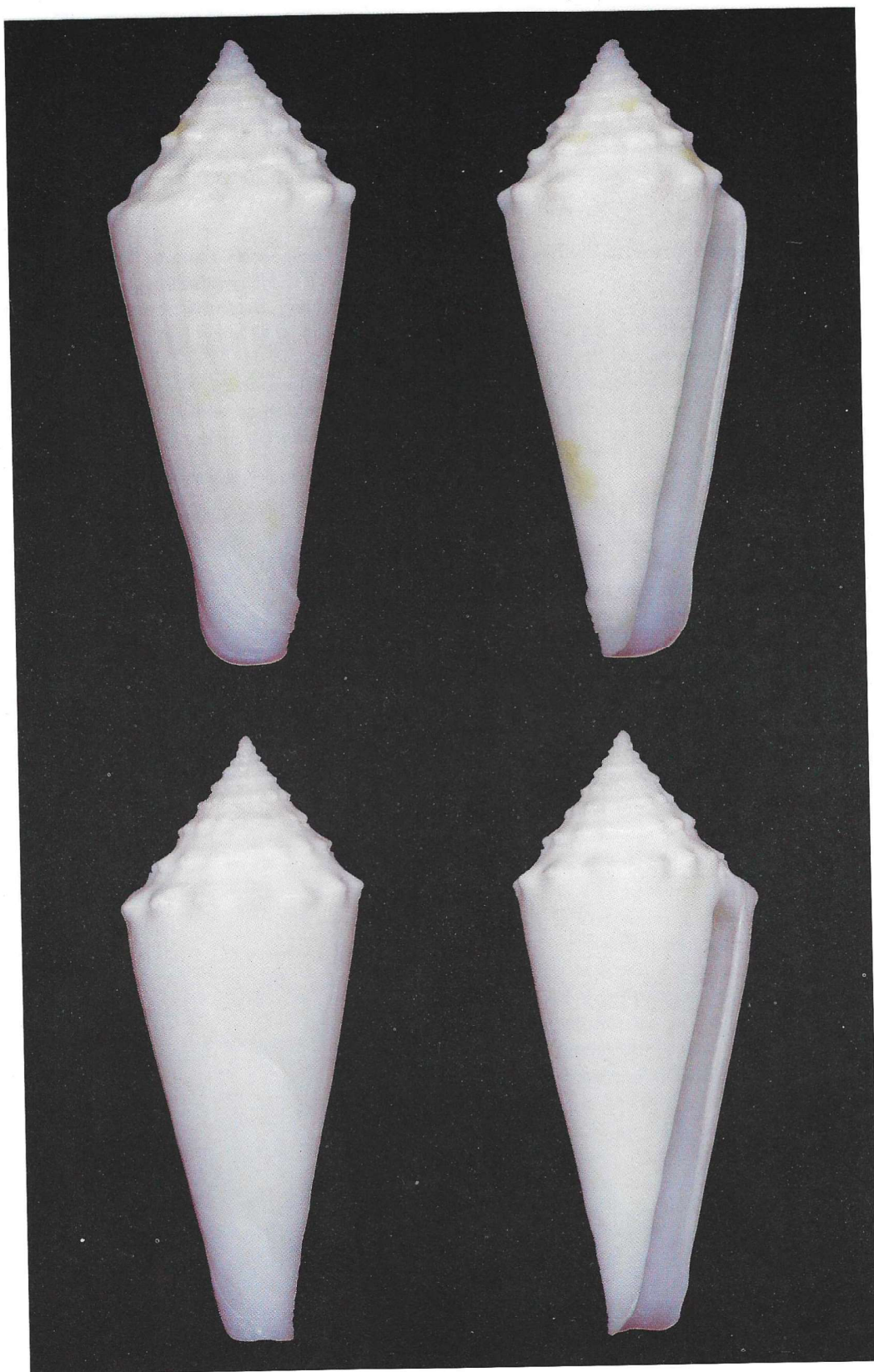


Fig.1: *C. lenhilli*, Mouchoir Bank - top: HOLOTYPE (39.8 x 15.7 mm); bottom: PARATYPE 2 (38.0 x 15.0 mm)

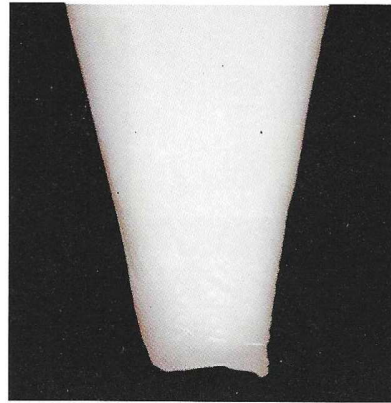


Fig. 2: *C. lenhilli* - a. spire details; b. anterior dorsum, having no spiral sculpture.

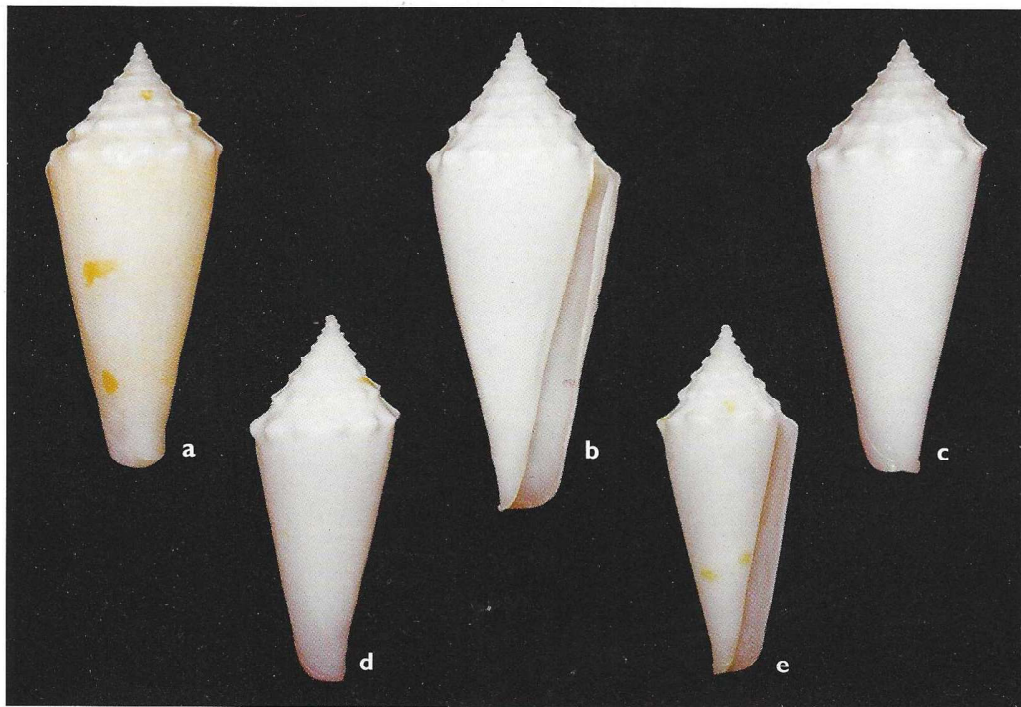


Fig. 3: *C. lenhilli*, Mouchoir Bank - a. PARATYPE 3 (37.1 x 14.8 mm); b. PARATYPE 1 (41.3 x 16.5 mm); c. PARATYPE 2 (38.0 x 15.0 mm); d. PARATYPE 4 (31.5 x 12.3 mm); e. PARATYPE 5 (30.3 x 11.5 mm).

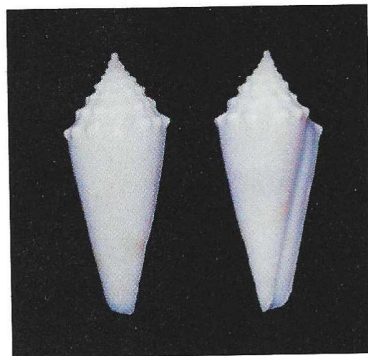


Fig. 4: *C. lenhilli*, Mouchoir Bank,
36.2 x 14.6 mm, PARATYPE 6,
Leonard C. Hill coll..



Fig. 5: *C. mazei* forms, W.P. Cargile coll.,
a. Cay Sal Bank, 42.0 x 13.0 mm;
b. Mouchoir Bank, 47.7 x 12.9 mm.



Fig. 6: Comparison with *Conus helgae*.

- a. *C. helgae*, Tulear, Madagascar, 39.4 x 18.0 mm; b. *C. lenhilli*, Mouchoir Bank, 41.3 x 16.5 mm (PARATYPE 1);
c. *C. helgae*, Tulear, Madagascar, 37.5 x 17.1 mm; d. *C. lenhilli*, Mouchoir Bank, 38.0 x 15.0 mm (PARATYPE 2);
e. *C. helgae*, Tulear, Madagascar, 38.2 x 17.2 mm.



Sthenorytis pernobilis