siratus

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Conus bertarollae

SIRATUS
Conquiliologistas do Brasil

Editorial

Finalmente após um longo período os Conquiliologistas do Brasil estão publicando o número 13 de Siratus como uma edição ocasional. A partir deste número estaremos procurando editar uma ou duas revistas por ano, visando apoiar os novos malacologistas que estão aparecendo nas Universidades e Museus brasileiros. Será um esforço muito grande dentro das dificuldades da nossa sociedade.
Neste número publicamos 4 artigos, um descrevendo uma nova espécie de Conus; outro com comparações das formas geográficas de Marginella fulminata e M. cloveri; outro sobre distribuição de fauna e o último sobre a fauna malacológica na alimentação do peixe-morcego (Ogcocephalus vespertilio)
Esperamos que este nosso esforço possa ajudar a Malacologia, em especial a brasileira.

Finally after a long time, we are publishing Siratus 13 as an occasional edition. From now on, we'll try to do one or two magazines per year, as a way to help young scientists from Brazilian universities and museums. It will be a hard work, due to our club financial situation.
In this number, we are publishing 4 articles: one describing a new species of Conus, another about comparisons of geographic forms of Marginella fulminata and M. cloveri, another about distribution of fauna and the last one about feeding habits of fish Ogcocephalus vespertilio.
We hope that our efforts can help Malacology, especially here in Brazil.

José Coltro Júnior
Editor

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Cover photos

***Conus bertarollae* Costa & Simone**

Fotos/photos: Paulo Marcio S. Costa

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A New Species of Conus Linné (Caenogastropoda, Conoidea) from the Brazilian Coast

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Abstract:

Conus bertarollae, a new species of Conidae is described for shallow waters on reef areas off Bahia Coast, Brazil. The shell is easily distinguishable by the small size, a strong reddish color and by relatively tall spire with almost straight profile. On the inner anatomy the species has papillated mantle border, absence of salivary glands, a well-developed snout gland, a simple penis tip fashion and two flaps crossing from head to mantle anterior to female genital aperture.

Key words: *Conus bertarollae*, new species, anatomy, Mollusca, Conoidea, Brazil.

Introduction:

The genus Conus Linné, 1758 (type species C. marmoreus Linné, 1758), Conidae, is represented in Brazil by 19 species: *C. achetypus* Crosse, 1865; *C. austini* Rehder & Abbott, 1951; *C. brasiliensis*, Clench, 1942; *C. centurio* Born, 1778; *C. clerii* Reeve, 1844; *C. clechi* Martins, 1943; *C. daucus* Hwass, 1792; *C. ermineus*, Born, 1778; *C. jaspideus* Gmelin, 1791; *C. mazei* Deshayes, 1874; *C. mindanus* Hwass, 1792; *C. mus*, Hwass, 1792; *C. regius* Gmelin, 1791; *C. riosi* Petuch, 1986; *C. sanderi* Wils & Moolenbeck, 1979; *C. scopulorum* Van Mol, Tursch & Kempf, 1971; *C. selenae* Van Mol, Tursch & Kempf, 1967; *C. tostesi* Petuch, 1986; *C. villepinii* Fischer & Bernardi, 1867 e *C. xanthocinctus*, Petuch, 1986 (Rios, 1994).

The extensive Brazilian coast has several areas where the malacofauna is poorly known or in some cases virtually uninvestigated. It was in one of these areas, that professional divers collected some interesting specimens of Conus, that drawn our attention due to the bright red color of the shell and soft parts. As it turned out this species proved to be unknown to science.

The systematics of the Conoidea had been changed in recent years based on inner morphology studies, mainly on the foregut anatomy. This structure possesses the complex and highly modified venom apparatus. Taylor, Kantor & Sysoev (1993) brought new taxonomic concepts, phylogenetic analysis mainly based on shell, operculum and foregut characters and a standardization of anatomical terminology. A complete anatomical description is also included in present description. Not only as a contribution for recent methodology of classification but also as part of a larger project on morphological comparative study of the Caenogastropoda, in such the presented species is one of the conid representatives, developed by the junior author.

Material and Methods:

The anatomical study is based on dissection using standard techniques, of two males and one female. The specimens were fixed in 70% ethanol. Some parts such as foregut and pallial genital ducts were dehydrated in ethanol series, stained with carmine, cleared and fixed in creosote. All drawings were made using a camera lucida. Radulae and opercula were also examined in SEM in the "Laboratório de Microscopia Eletrônica do Instituto de Biociências da Universidade de São Paulo". Systematics and anatomical terminology follow Taylor et al. (1993) and, on other structures beyond foregut, Marcus & Marcus (1960).

In the figures, the following abbreviations are used: aa, anterior aorta; ac, anterior extremity of ctenidial vein; af, afferent gill vessel; ag, albumen gland; an, anus; ap, anal papilla; as, anterior sphincter of buccal tube; au, auricle; bc, bursa copulatrix; bm, buccal mass; br, bulged basal region of radular sac; bt, buccal tube; ca, capsule gland and bursa apertures; cg, capsule gland; ci, circular muscle fibers; cm, columellar muscle; cv, ctenidial vein; dd, duct to digestive gland; dg, digestive gland; dp, dilated distal end of penis duct; es, esophagus; ey, eye on ommatophore; ff, foot lateral furrow; fs, foot sole; gi, gill; hg, hypobranchial gland; ib, inner wall of buccal tube; ig, ingesting gland; in, intestine; kd; dorsal lobe of kidney; ki, kidney; km, membrane between kidney and pallial cavity; ks, ventral septate lobe of kidney attached to intestine; lf, longitudinal muscle fibers; mb, mantle border; mo, mouth; mp, mantle edge papillae; ne, nephrostome; ng, nephridial gland; nr, nerve ring; nv, nerve; ob, outer wall of buccal tube;

op, operculum; os, osphradium; ov, oviduct; pb, proboscis; pc, pericardium; pd, penis duct; pe, penis; pg, anterior furrow of pedal glands; ps, pallial spermoduct; re, rectum-anal septum; rm, retractor muscle of proboscis; ro, rhynchostome; rr, rostrum; rs, radular sac; rt, rectum; rw, rhynchodeal wall; si, siphon; sn, snout gland; sp, rhynchostomal sphincter; st, stomach; sv, seminal vesicle; te, cephalic tentacles; tg, tegument; tp, terminal pouch or pair of flaps anterior to pallial oviduct; tt, radular tooth; va, vaginal duct; vb, venom bulb; vd, visceral vas deferens; ve, ventricle; vg, venom gland.
Institutions abbreviations: AMNH: American Museum of Natural History; ANSP: Academy of Natural Sciences of Philadelphia; IBUFRJ: Instituto de Biologia da Universidade Federal do Rio de Janeiro; MNHN: Muséum National d'Histoire Naturelle; MNRJ: Museu Nacional da Universidade Federal do Rio de Janeiro; MORG: Museu Oceanográfico da Fundação Universidade de Rio Grande; MZSP: Museu de Zoologia da Universidade de São Paulo; USNM: National Museum of Natural History, Smithsonian Institution.

Systematics:

Conus bertarollae new species
(Figs 1-20)

Type Material: Holotype: MORG 39.007, (22.0 by 11.5 mm). **Paratypes:** MNRJ (23.9 by 12.5 mm); IBUFRJ 8.920 (24.9 by 13.5 mm); USNM (22.8 by 12.0 mm); ANSP (26.0 by 13.4 mm); MNHN (20.4 by 10.5 mm); AMNH (18.0 by 9.4 mm); IBUFRJ 8.919, 3 specimens (15.0 by 7.8 mm; 16.2 by 8.5 mm; 18.7 by 9.7 mm). MZSP 28.778; 3 specimens (22.2mm by 12.2mm; 21.7mm by 11.1mm; 22.5mm by 12.2mm) Coltro Collection; 1 specimen (27.8mm by 11.8mm) Cargile Collection. All from type locality.
Type Locality: Off Alcobaça, Bahia, Brazil

Description:

Shell (figs 1-5) small for genus (length up to 26 mm) with approximately 8 whorls. Color bright orange red with white blotches on spire and shoulder and a spiral band of irregular blotches at mid whorl. Exceptionally, this band may be reduced or missing in some specimens. Spire comprising 1/7 to 1/8 of total shell length, sculptured with thin spiral grooves. Suture deep, inserted just below shoulder, giving to spire a stepped aspect. Protoconch mamilated, white in color, with 0.5 mm in diameter. Teleoconch with a slightly convex profile, sculptured with very thin growth lines crossed by spiral lines (25 on body whorl of holotype) that become stronger anteriorly. Shoulder angular and smooth. Aperture narrow, slightly widening anteriorly. Outer lip smooth with a deep anal canal near suture. Inner lip smooth Aperture orange-red near its edge turning into a lavender white towards the interior.
Head-foot (figs 8, 9, 11, 12). Pigmented by clear pink-orange to dark pink in exposed areas, inclusive penis; posterior regions cream. Head long, broad, somewhat peduncle like, attached to foot-columellar muscle axis by a broad base. Rostrum of about half of remainder head length, broad, ample distal aperture. Cephalic tentacles long, narrow, with a dark eye near distal region on small ommatophore sited ventrally; tentacle region basal to eye clearly broader than short apical region. Foot broad, somewhat triangular; sole plane; between sole and dorsal foot region a longitudinal, shallow furrow (figs 8, 9: ff); aperture of pedal glands a transversal, deep, broad furrow in anterior foot margin (fig. 2). Males with penis in right-posterior side of head, described bellow. Female with a secondary flap near right limit of columellar muscle also described bellow.
Operculum (fig. 6). Corneous, somewhat rectangular, sited in posterior-dorsal region of foot (fig.8); small sized, occupying small portion of shell aperture.
Mantle organs (figs 10, 13). Mantle border and siphon pigmented with clear pink-orange to dark pink. Mantle border thick, bearing small, uniform, well-spaced papillae, which can occur from its entire width to only its left half. Siphon slightly short, stubby; borders smooth, thick. Osphradium bipectinate, elliptical; each filament scalloped; right filament in approximately equal number than left filaments; right filaments taller and angled; left filaments rounded. Gill long, somewhat narrow, anterior limit slight far from mantle edge, preceded by a short and curved portion of ctenidial vein; each gill filament triangular, turned to right. Between gill and rectum a broad space (about half of pallial cavity width). Hypobranchial gland thin, transparent, uniform surface, most concentrated close rectum. Rectum narrow, in right margin of pallial cavity. Anus situated posterior, about in middle level of pallial cavity; anterior to anus a short septum, distal region of this septum with a papilla. Between rectum and adjacent region of pallial floor run the genital ducts, described bellow.
Excretory and circulatory systems (fig. 14). Kidney of about 1/3 whorl, situated behind posterior-right limit of pallial cavity. A single and tall lobe attached to rectum strongly pigmented by pink, bearing several transversal not uniform somewhat sinuous folds; around this lobe a somewhat broad hollow space. Nephridial gland narrow, white, situated in dorsal region of membrane between kidney and pericardium chambers. Nephrostome a transversal slit, in middle region of membrane between kidney and pallial cavity. Heart proportionally large, discretely smaller than kidney, situated just behind posterior-left limit of pallial cavity; auricle with thin transparent walls, ventricle very broad, thick walled; anterior aorta very broader than posterior aorta.
Digestive system (figs 11, 12, 14-17). Rhynchostome in distal aperture of rostrum, preceded by a well-developed sphincter (fig. 5: sp). Rhynchodeal wall with muscular tissue in its anterior half (fig. 12), outer longitudinal fibers (lf), inner circular fibers (ci); gradually muscular tissue faint posteriorly, rhynchodeal walls become a thin, semi-transparent membrane. Rhynchodeal walls outer surface connected with inner surface of tegument by a series of small muscular, short fibers, more concentrated

anteriorly. Snout gland well developed (figs 11, 12), in right-posterior region of rhynchodeal wall, bulging within haemocoel; cylindrical, with rounded distal end; inner surface strongly folded, with a white, glandular tissue. Rhynchodeal walls continue with proboscis base. Proboscis conic, slight small, narrow, with about half of rhynchodeal cavity length and width. Proboscis walls with outer layer of circular muscular fibers and inner layer of isolated longitudinal fibers (fig. 16: lf), some of them origin a strong pair of proboscis retractor muscle, inserted in inner lateral surface of haemocoel (fig. 11). Oral tube double walled (figs 16, 17); outer wall thin-transparent (ob), composed almost exclusively by longitudinal muscle fibers, some of them with connections with inner proboscis surface; inner wall (ib) also thin, semi transparent, with inner mucous epithelium. Anterior region of oral tube with a well-developed sphincter just posterior to mouth (fig. 17: as), gripping a tooth. Outer wall of oral tube posterior limit connected with adjacent regions of proboscis and buccal mass by several small muscle fibers (fig. 16). Inner wall of oral tube continuous with buccal mass. Buccal mass somewhat spherical, thick muscular walled (a broad sphincter); inner surface with several uniform low folds, all them beginning and finishing in about same level; two small orifices in right side, that anterior of radular sac, that posterior of venom gland (fig. 16). Radular sac long, curved, with a bulged region in its base (br); brings several radular teeth more concentrated in bulged part. Each radular tooth (fig. 7) cylindrical harpoon-like, measuring about 900 µm long, barbed irregular base, sharp and long tip; tip with a longitudinal, narrow aperture edged in a side by from nine to 12 small, uniform, sharp cusps; in opposite side than aperture a sub-terminal barb. Venom gland extremely long (fig. 12), more than total length of shell when straightened, high convolute, about 90% posterior to nerve ring (always with a loop attached to esophagus in opposed side than remainder gland; fig. 11); without differences in width along its length except a narrow region preceding venom bulb. Venom bulb large, long, somewhat cylindrical, elliptical outline. Salivary glands not found. Esophagus broad, thin walls; inner surface with some longitudinal, low, irregular folds (figs 12, 16). Posterior region of esophagus narrow. Stomach narrow, curved, simple; inner surface with longitudinal, low folds; single duct to digestive gland situated in its right-posterior region (fig. 14). Digestive gland anterior limit with kidney and with pericardium at right and pallial cavity at left (fig. 14), surrounds completely stomach. Intestine narrow, almost straight, runs right margin of anterior region of visceral mass, part through kidney, exits to pallial cavity as above described. Genital system. Male. Testis in peri-columellar region of visceral mass, sperm duct narrow, running on columella. Seminal vesicle situated about half whorl posterior to pallial cavity, strongly convolute (fig. 14), very thick, glandular walls. In ventral region of kidney crosses from left to right side and gradually narrows. Exits to pallial cavity as a broad tube running in right margin of pallial cavity floor (figs 10, 14); posterior region thick walled by prostate gland; anterior region thin walled, suddenly towards left until penis base (fig. 8). Penis somewhat short (fig. 8), dorso-ventrally flattened; penis duct convolute; penis tip rounded, aperture in its middle region, preceded by a broader cavity of penis duct (fig. 19).

Female (figs 18, 20). Posterior regions similar to those of male. Oviduct narrow in ventral region of kidney, near right-posterior limit of pallial cavity floor inserts in left surface of pallial oviduct and continues as vaginal duct in its left surface. Albumen gland semi-spherical, white, attached to kidney, between both a small ingesting gland, broad, situated compressed in right-posterior region. Capsule gland long, about half of total pallial oviduct, cylindrical, thick walled, yellow, broad but compressed inner duct continuous with vaginal duct; anterior limit of capsule gland suddenly narrows. Bursa copulatrix slight large, broad, situated in dorsal surface of narrow anterior region of capsule gland. A pair of narrow muscular flaps (tp), connected longitudinally with mantle and dorsal surface of head, close right limit of pallial cavity, anterior to anus; capsule gland-vaginal duct and bursa copulatrix apertures open together between both flaps (ca), in its posterior region. Right flap narrower and shorter than left flap (fig. 20).

Discussion:

Conus bertarollae can be easily distinguishable for its characteristic bright orange-red color pattern. Conus archetypus also occurs in the Abrolhos archipelago, but it can be differentiated in its length/width proportion that is about 1.74, while in *C. bertarollae* this proportion is about 1.93, the spiral sculpture in *C. archetypus* is weaker and the coloration is paler even in orange specimens.

Conus ceruttii Cargile, 1997, from the Caribbean coast of Honduras and Nicaragua, has a variable color pattern (Cargile, 1997: 50, fig. 5), and the most common variation is extremely similar to the color pattern of *C. bertarollae*. Yet, C. ceruttii is larger (length about 40 mm, width about 20 mm) than *C. bertarollae* (length about 26 mm, width about 13 mm); in *C. ceruttii* the spiral sculpture is restricted to the anterior third of the shell, while in *C. bertarollae* the spire and the whole body whorl are spirally sculptured. The soft parts of *C. ceruttii* are cream colored while in *C. bertarollae* they are reddish orange.

The rostrum, i. e., an extensible tube anterior to rhynchocoel, which cannot be inverted into this, has been found in fish-feeding Conus and may be a character of a sub-group of the genus. The snout gland is other character exclusive of some species of Conus, Taylor et al. (1993: 129) reported 18 species with this structure, "all but one of which are known to be vermivorous". The remainder foregut characters are of typical conoidean feature, except by the absence of salivary gland.

Some other anatomical characters are different from the other conoideans which had been studied by Marcus & Marcus (1960) and by the junior author (some turrids and terebrids). They are: 1) the papillae in the mantle border; 2) the septum anterior to anus (generally the anus of the conoideans have only a papilla); 3) the outstanding, almost peduncled head; 4)

the simple penis, without papilla in the tip; and 5) the pair of muscular flaps of the tegument in anterior region of the pallial oviduct, which may be analogous (or homologous?) to terminal pouch.

Etymology:

This shell is named after late Mrs. Berta Roll, for her help and collaboration finding shells all around the world on the company of her husband Dr. Artur Roll, making his collection one of the most important in Europe.

Acknowledgments:

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Legends

Fig. 1 – *Conus bertarollae*, 22mm, Holotype, ventral view
Fig. 2 – *Conus bertarollae*, 22mm, Holotype, dorsal view
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Figs 18-20, *Conus bertarollae* anatomy: 18) pallial oviduct, lateral-right view, terminal pouch flaps (tp) sectioned from head, also a detail of a transversal section of capsule gland, adjacent structures not represented; 19) penis extracted from head, dorsal view; 20) pallial oviduct shown in fig. 11, ventral view. Scales = 1 mm.

Fig. 1

Fig. 2

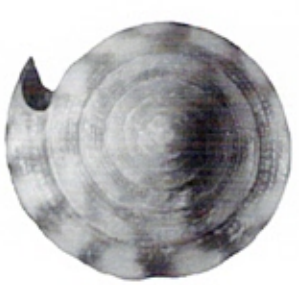


Fig. 3

Fig. 4

Fig. 5

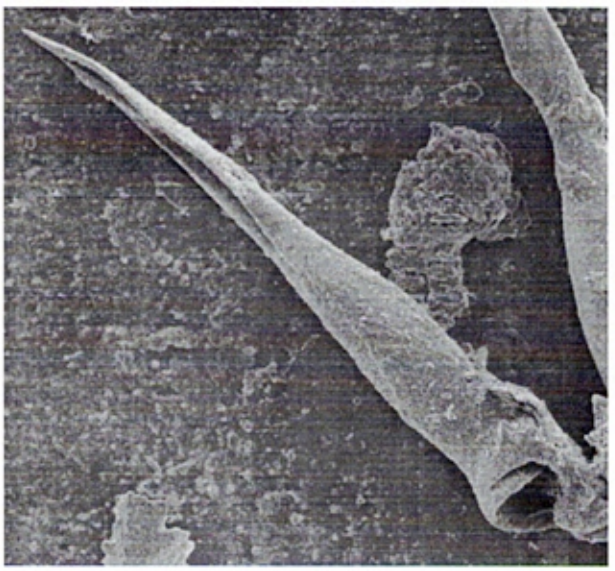


Fig. 7 – *Conus bertarollae*, tooth radula

Fig. 6 – *Conus bertarollae*, operculum

Fig. 8

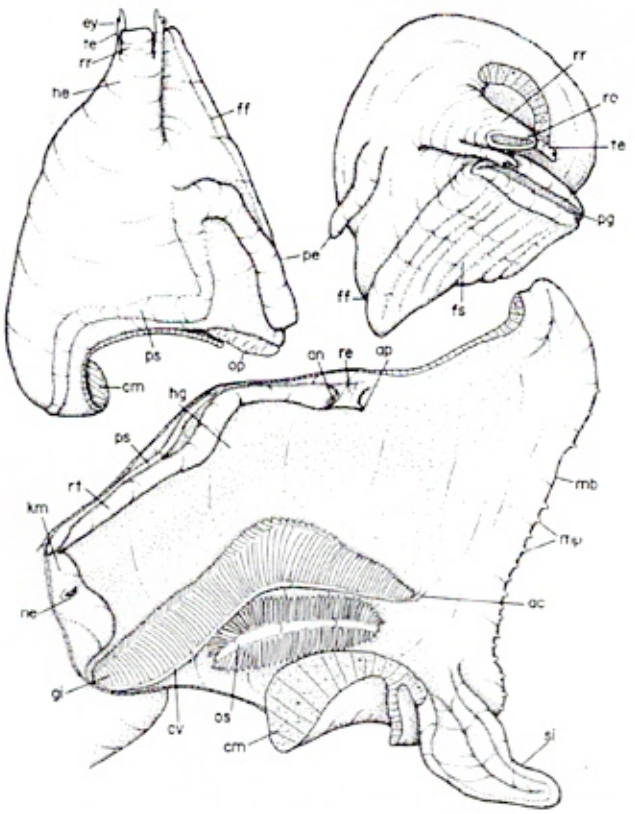


Fig. 10

Fig. 9

Fig. 11

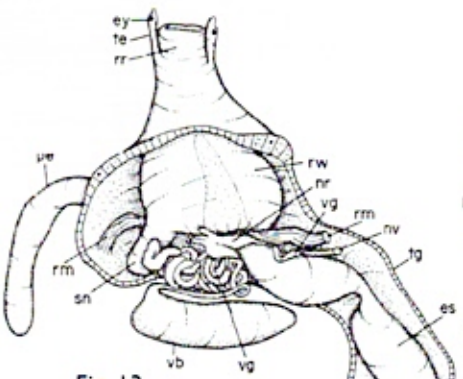


Fig. 13

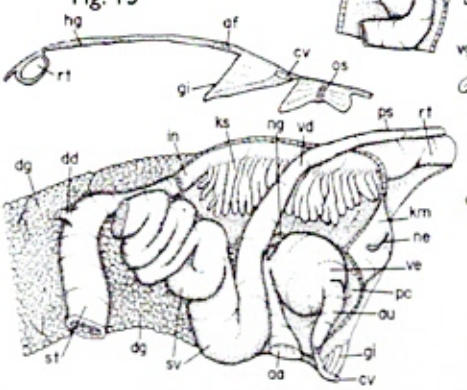
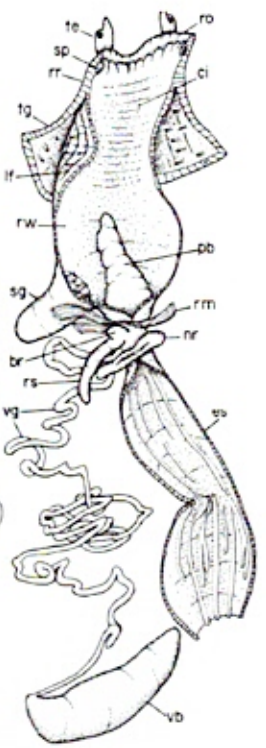


Fig. 14

Fig.12



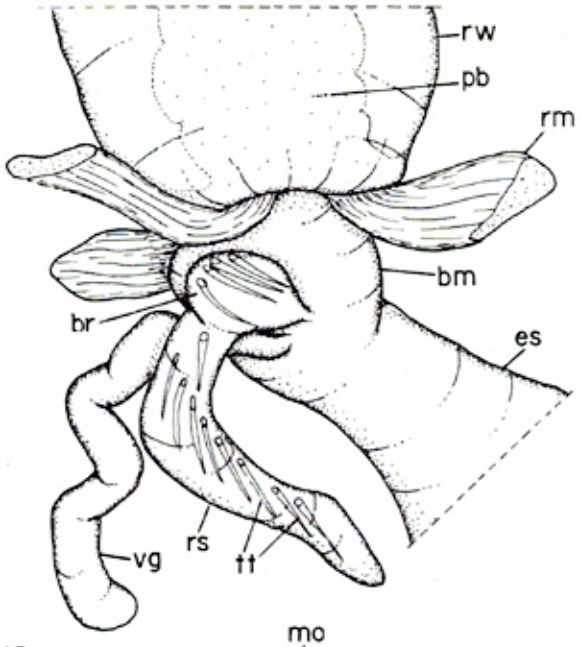


Fig.15

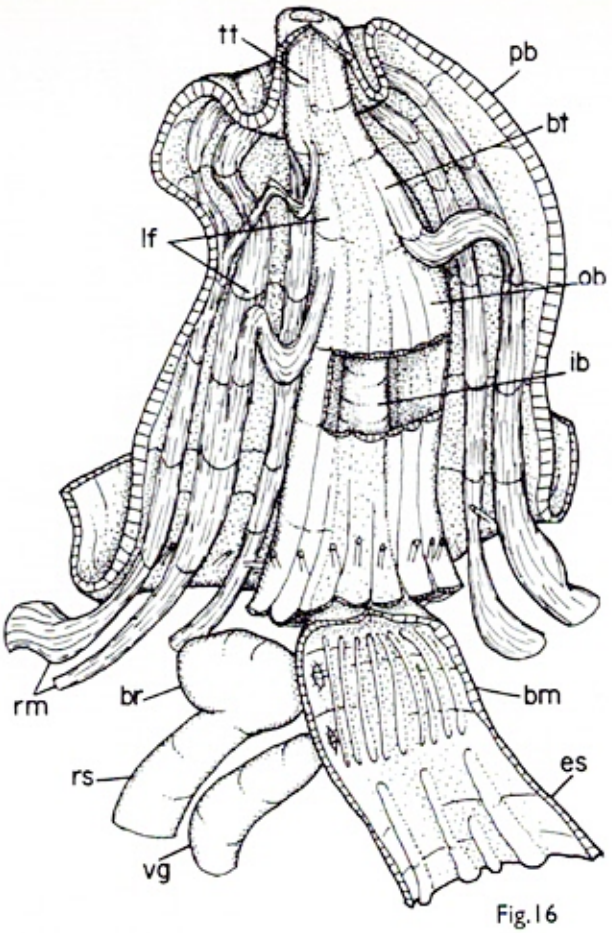


Fig.16

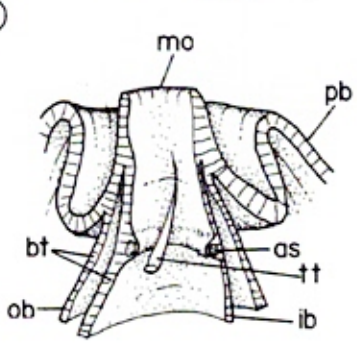


Fig.17

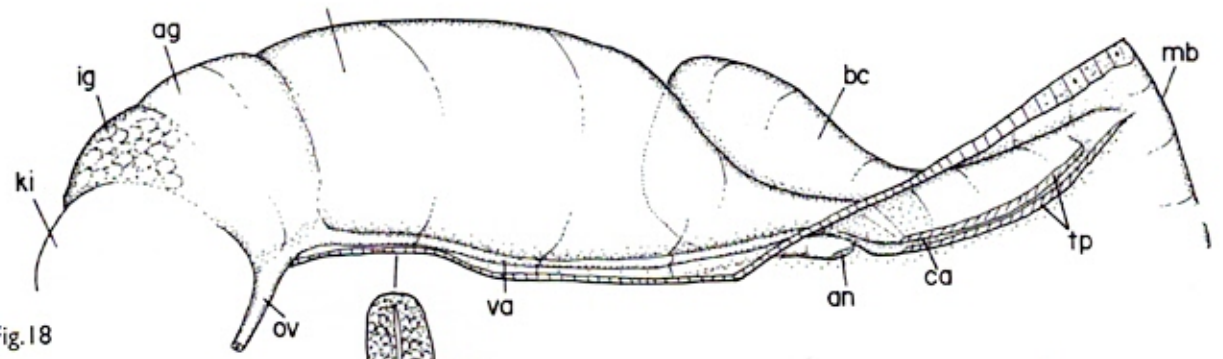


Fig.18

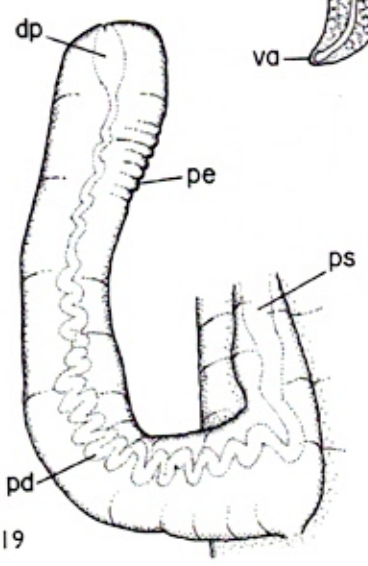


Fig. 19

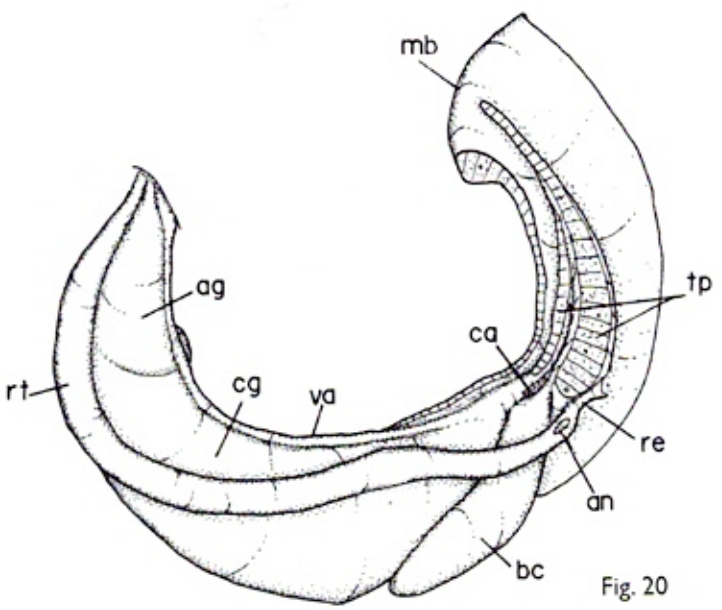


Fig. 20

SIRATUS
Conquiliologistas do Brasil

Notes on *Marginella cloveri* Rios & Matthews, 1972 and *Prunum fulminatum* (Kiener, 1841) (Gastropoda, Muricoidea, Marginellidae).

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Abstract:

Marginella cloveri Rios & Matthews, 1972 and *Prunum fulminatum* (Kiener, 1841) are species that are endemic to Brazil but have very wide geographical ranges along its coast. Throughout this range they present conchological variation that has misled Brazilian malacologists. *Eratoidea hematita* (Kiener, 1834), from Florida, U.S.A., was reported to Brazil based on abraded shells of the red variation of *M. cloveri*. *Prunum apicinum* (Menke, 1828) and *P. roscidum* (Redfield, 1860), from the USA, were also reported to Brazil, based on color and shell shape variations of *P. fulminatum*.

Resumo:

Marginella cloveri Rios & Matthews, 1972 e *Prunum fulminatum* (Kiener, 1841) são espécies endêmicas do Brasil, mas que têm ampla distribuição ao longo de sua costa. Estas espécies apresentam acentuada variação conquiliológica, que levou malacólogos brasileiros a alguns enganos. O registro de *Eratoidea hematita* (Kiener, 1834), da Florida, E.U.A, em águas brasileiras, foi baseado em conchas erodidas da variação vermelha de *M. cloveri*. *Prunum apicinum* (Menke, 1828) e I (Redfield, 1860) foram registrados em águas brasileiras baseando-se em variações de coloração e forma de *P. fulminatum*.

Introduction:

The family Marginellidae is going through a boom in popularity (Boyer 1991, 1995; Bozzetti, 1996). Not only the marginellas have pretty, colorful and shiny shells, but also the recent works of Gary and Holly Coovert, and Robert Lipe's book (Lipe, 1991) have helped to promote collectors interest.

The shell of this family, albeit attractive, are some times rather featureless, and often show remarkable intraspecific variation. These conchological disparities, within one species, allied with different species that have very similar shells greatly complicate the taxonomic work of this family's researcher and enthusiast alike. When determining a species identity, it is very important to have a large specimen series from as wide geographical range as possible, in order to encompass the scope of variation of that species. Specially when describing a species or subspecies, or one risks to describe individuals that are within a morphological range.

The goal of this work is to illustrate exactly how this variation have hampered the taxonomic work of Brazilian malacologists, where three Caribbean species were mistakenly assigned to Brazilian waters, based on varieties of two species endemic to Brazil.

Abbreviations:

AMNH American Museum of Natural History, New York. ANSP Academy of Natural Sciences of Philadelphia, Philadelphia. IBUFRJ Instituto de Biologia / Universidade Federal do Rio de Janeiro, Rio de Janeiro MNHN Muséum National d'Histoire Naturelle, Paris. MORG Museu Oceanográfico "Prof. Eliézer de Carvalho Rios", Rio Grande. USNM National Museum of Natural History, Smithsonian Institution, Washington.

Marginella cloveri Rios & Matthews, 1972

Marginella festiva Kiener, 1841, RIOS (1970): 112
Marginella cloveri Rios & Matthews, 1972, RIOS (1975): 123
Marginella hematita Kiener, 1834, RIOS (1975): 123
Marginella cloveri Rios & Matthews, 1972, RIOS (1985): 123
Marginella hematita Kiener, 1834, RIOS (1985): 123
Marginella haematita Kiener, 1834, LEAL (1990): 170
Marginella cloveri Rios & Matthews, 1972, RIOS (1994): 148
Eratoidea hematita (Kiener, 1834), RIOS (1994): 148

Description:

Shell medium (10 mm - 24 mm in length), biconic. Surface glossy, marked with irregular indistinct growth lines. There are two color morphs: one has grayish cream back ground crossed by two brown spiral bands sided by darker flamules, between these two bands and below the suture there are other bands formed by either brown zigzag lines or flamules (fig. 1); the other form has a purplish red background, with three darker spiral bands, one subsutural, another on the middle of the whorl, and the last on the anterior third, between these bands there are series of wavy axial lines (fig. 2,3). Protoconch globose, translucent with 2 3/4 whorls with a darker patch in its first whorl. Spire moderately high with between 3 and 4 moderately convex to straight whorls. Outer lip thickened internally, with distinct heavy external varix, labial

denticulation distinct (11-14 denticles), with 2 stronger posterior denticles. Aperture somewhat wide arched, with a posterior canal formed by the posterior labial denticle. Parietal wall slightly convex uncallused. Columella somewhat concave with four strong plications, the interspaces between them increases posteriorly, the two first plications are the most oblique.

Range (fig. 5):

Brazil, off Cabo Cassiporé, Amapá State, to Abrolhos Archipelago, Bahia State.

Discussion:

M. cloveri can be easily referred to Marginella due to its complex color pattern an strong labial varix. The species of Eratoidea may form a varix on the external lip but not as strong as in Marginella also the color patter in the former is composed at most by a few spiral bands. *M. cloveri* is the only known species of this genus in the west Atlantic.

The register of *Eratoidea hematita* (Kiener, 1834) (fig. 5) in the Brazilian coast (Leal, 1990; RIOS, 1975, 1985, 1994) is a mistake based on abraded shells of *M. cloveri* (fig. 4) that had lost their typical pattern (Fig. *M. cloveri* abraded). M. cloveri may identified by its leaner shell, complex coloration and stronger labial denticulation, while *E. hematita* is more biconic has a higher spire, more inflated shell with a uniform red color and some times circular pustules on the parietal wall.

The fact that the brown form occurs only in the northern part of the range and its wide spread distribution could raise doubts about whether these two forms might be in fact two separate species, particularly because Rios & Matthews (1972) described only the brown form. However, red and brown specimens from the same locality (MORG 13144, MNRJ 3632) present exactly the same shell shape. There common elements in the color patterns, such as the darker patch on the protoconch, the spiral bands and the wavy lines between them, even if their disposal is different. Chromatic variations of this sort seem to be fairly common in this genus, in some African species (*M. rosea, M. spinacia* Gofas & Fernandes, 1988 e M. chalmersi Tomlin & Shackleford, 1912) this variation has been documented (Boyer, 1991; Gofas & Fernandes, 1988), and as with *M. cloveri*, some of the forms are restricted to certain localities.

Examined Material:

Holotype:

MORG 15190 collected off Cabo Cassiporé, Amapá State, Brazil, 100 m, in XI/1967.

Paratypes:

MORG 14907: 3 shells collected off São Luiz, Maranhão, Brazil, 45m, in 04/1968. MORG 13144: 2 shells collected off Cabo de São Roque, Rio Grande do Norte state, Brazil, 45m, in 04/1968. MNRJ 3632: 2 shells collected off Cabo de São Roque, Rio Grande do Norte state, Brazil, 45m, in 04/1968.

Other material

MORG 12189: 1 shell (identified as "*Marginella hematita*") collected off Fortaleza, Ceará State, Brazil, 21 m, in 10/1966. MORG 13120: 3 shells collected off Fortaleza, Ceará State, Brazil, 35 m, in 04/1968. IBUFRJ 689: 2 shells (identified as "*Marginella hematita*") collected of João Pessoa, Paraíba State, Brazil, in 04/1968. IBUFRJ 5533: 2 shells collected off Salvador, Bahia State, Brazil, 20 m, in 08/1992. IBUFRJ 6551: 1 shell collected off Salvador, Bahia State, Brazil, 20 m, in 08/1992. MORG 20277: 4 shells collected at the Abrolhos Archipelago, off Caravelas, Bahia State, Brazil, in 02/1978. MORG 21028: 2 shells collected at the Abrolhos Archipelago, off Caravelas, Bahia State, Brazil, in 02/1973.

***Eratoidea hematita* (Kiener, 1841)**

MNHN: 2 shells without locality, collected by F. Jousseaume, in 1921. MNHN: 3 shells collected by F. Jousseaume, in Florida State, USA, in 1921. AMNH 214271: 1 shell collected off Sarasota, in Florida State, USA, 108 m, in 1961. USNM 413417: 1 shell collected off Fowey Light, in Florida State, USA, 99 m, in 1915. USNM 413148: 1 shell collected off Fowey Light, in Florida State, USA, 81 m, in 1915.

Prunum fulminatum (Kiener, 1841)

Marginella fulminata Kiener, 1841: 33
Marginella (Prunum) apicina Menke, 1828: Rios 1975: 116
Marginella (Prunum) apicina Menke, 1828: Rios 1985: 120
Prunum aff. apicinum (Menke, 1828): Rios, 1994: 149
Marginella (Glabella) roscida Redfield, 1860: Rios, 1975: 117
Marginella (Glabella) roscida Redfield, 1860: Rios, 1985: 121
Prunum aff. roscida (Redfield, 1860): Rios, 1994: 150

Shell medium (10 mm - 21 mm in length), broadly to narrowly biconic. Surface glossy, smooth. Color pattern extremely variable, it may be composed of brown zigzag axial lines, crossed by three indistinct, some times interrupted, spiral brown bands (one near the suture, one at mid whorl and the other near the anterior end), over a cream background; the variation tends towards the disintegration of the axial lines, becoming spiral rows of brown spots that eventually disappear altogether; the spiral bands also becomes fainter and vanish. Protoconch indistinct, with 2 _ whorls. Spire low, but prominent with 4, slightly convex whorls. Outer lip thickened to heavily so, with a distinct external varix, thinning abruptly at its posterior insertion, internally lacking labial denticulation.. Outer lip whitish or cream colored, some times with two brown blotches that correspond in position with the two anterior spiral bands, varix sometimes with a clear orange hue. Aperture varying from wide to somewhat narrow, widening anteriorly. Parietal wall convex often with a elongated white

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Fig. 12

Fig. 13

Fig. 14

Fig. 15

Fig. 1 *Marginella cloveri* Rios & Matthews, 1972 (holotype MORG 15190), length 24.3mm
Fig. 2 *Marginella cloveri* Rios & Matthews, 1972 (Paratype MORG 15191), length 13.2mm
Fig. 3 *Marginella cloveri* Rios & Matthews, 1972 (IBUFRJ 6551), length 11.3mm
Fig. 4 *Marginella cloveri* Rios & Matthews, 1972 (MORG 12189 identified as "Marginella hematita"), length 11.0mm
Fig. 5 *Eratoidea hematita* (Kiener, 1834) (AMNH 214271), length 11.0mm
Fig. 6 *Prunum fulminatum* (Kiener, 1841) (MORG 21952), length 16.1mm
Fig. 7 *Prunum fulminatum* (Kiener, 1841) (MORG 21952), length 16.1mm, dorsal view
Fig. 8 *Prunum fulminatum* (Kiener, 1841) (MORG 25132), length 14.9mm
Fig. 9 *Prunum fulminatum* (Kiener, 1841) (MORG 20852) length 21.5mm
Fig. 10 *Prunum fulminatum* (Kiener, 1841) (MORG 22801), length 14.1mm
Fig. 11 *Prunum fulminatum* (Kiener, 1841) (IBUFRJ 8923), length 16.2mm
Fig. 12 *Prunum fulminatum* (Kiener, 1841) (MORG 8248), length 19.9mm
Fig. 13 *Prunum fulminatum* (Kiener, 1841) (MORG 17992), length 19.1mm
Fig. 14 *Prunum apicinum* (Menke, 1828) (IBUFRJ 8963), length 11.6mm
Fig. 15 *Prunum roscidum* (Redfiel, 1860) (AMNH 21084), length 14.7mm

callus that just reaches the 5th plication. Columella straight to slightly concave, with 4 strong plications, with interspaces increasing posteriorly; a 5th posterior false one that varies greatly in strength is always present in fully adult shells. The 1st is weaker than the 2nd plication and both run very close to each other, almost fused. The 3rd and 2nd are subequal in size and the 4th is slightly weaker.

Range

Amapá State to Rio Grande do Sul State, Brazil.

Discussion:

This is the Brazilian Marginellidae with the most extensive known geographical range. It is possible that this range may yet be extended to neighboring countries (French Guyana to the north and Uruguay to the south), but so far no records are available.

The "typical" *P. fulminatum*, with brown zigzag lines (fig. 6,7) [Similar to the original illustration in Kiener (1841)], are known only from the coast of Bahia State, elsewhere along the Brazilian coast, series brown spots are the rule (fig. 8-11, 13). Thus the true typical form of *P. fulminatum* is the spotted one, and population in Bahia, is a localized color variation.

Prunum fulminatum can most easily be confused with *P. rubens* (Martens, 1881), specially because in the southern part of its distribution, where *P. rubens* is present, *P. fulminatum* tends to be larger and more inflated, its color pattern is faded and reduced to faint spots. But *P. rubens* can be distinguished for its uniform light brown coloration, its lower spire, less angular shape, the columella is more concave, and the 5th plication when present, is stronger and placed father from the 4th, while *P. fulminatum* has a light beige coloration crossed by bands of faint brown spots, the external lip is thicker and the external varix stronger and the first plication is less oblique.

The register of *P. apicinum* (Menke, 1828) (fig. 14) to Brazilian waters is based on small worn specimens of *P. fulminatum* without its typical coloration (MORG 8248, 15084, 15127, 20784) (fig. 12). But *P. apicinum* is generally smaller (8 mm-12 mm in length) has a higher posterior labial insertion, the parietal callus partially extends itself over the spire, the general color is brownish yellow with three darker spiral bands, the protoconch is proportionally smaller and darker in color, the adults don't have a 5th false plication. Likewise, the register in the Brazilian coast of *P. roscidum* (Redfield, 1860) (fig. 15) was based on finely spotted specimens (MORG 17992) of *P. fulminatum* (RIOS, 1985: pl. 42 fig. 536; 1994: pl. 49, fig 657) (fig. 13), but in the former the color pattern is composed of white spots over light brown background, crossed by three darker bands, and the outer lip is denticulated, whereas in the latter it is brown spots over a lighter background, the shell is more inflated and angular.

Examined material

Prunum fulminatum (Kiener, 1841)

MORG 18134: 1 shell collected off Amapá State, Brazil, 86 m, in 5/1968. MORG 25132: 3 shells collected off Recife, Pernambuco State, Brazil, beached shell, in 1968. MORG 20852: 1 shell collected at Guaratiba reef, Bahia State, Brazil, 3 m, in 2/1974. MORG 21952: 3 shells collected off Porto da Barra, Bahia State, Brazil, 5 m, in 1982. IBUFRJ 8923: 2 shells collected at top of seamount off Alcobaça, Bahia State, Brazil, in 7/1997. MORG 17992: 1 shell collected off northern Espírito Santo State, Brazil, 120 m, in 7/1973. MORG 8248: 3 shells collected at Ilha de Vitória off Vitória, Espírito Santo State, Brazil, in 1960. MORG 22151: 5 shells collected off Cabo de São Thomé, Rio de Janeiro State, Brazil, 60 m, in 1987 MORG 10179: 4 shells collected off Rio de Janeiro, Rio de Janeiro State, Brazil, 30 m, in 1963. MORG 20784: 2 shells (identified as "*Marginella apicina*") collected at Cagarras Island off Rio de Janeiro, Rio de Janeiro State, Brazil, 30 m, in 11/1971. MORG 15084: 5 shells (identified as "*Marginella apicina*") collected off Santos, São Paulo State, Brazil, 79 m, in 9/1969. MORG 15127: 1 shell (identified as "*Marginella apicina*") collected off Solidão, Rio Grande do Sul state, Brazil, 140 m, in 10/1969. MORG 25012: 1 shell (identified as "*Marginella apicina*") collected off Torres, Rio Grande do Sul state, Brazil, 230 m, in 2/1987.

Prunum apicinum (Menke, 1828)

IBUFRJ 8963: 10 shells collected at Pine Island, Florida, USA, 1956.

Prunum roscidum (Redfield, 1860)

AMNH 214084: 1 shell collected at Onslow bay, South Carolina State, 105 m, USA, in 9/1971. AMNH 214083: 1 shell collected off Charleston, 54 m, South Carolina State, USA. AMNH 213750: 4 shells collected off Port Canaveral, 54 m, Florida State, USA, in 5/1983. IBUFRJ 8964: 1 shell collected at Pine Island, Florida, USA, 1956.

Acknowledgments

This work wouldn't have been possible if it wasn't for the support of Dr. Eliézer C. Rios, who loaned most the material herein studied. I am in debt to José Coltro, Marcus Coltro and Luis Márcio Lemos Couto who contributed with some specimens herein studied. I am also grateful to Paulo Márcio Costa, who always provided useful insights when I most need them. To Gary A. Coovert for supplying much of the bibliography used my sincere gratitude. And to Dr. Ricardo S. Absalão for his criticisms on the draft manuscript.

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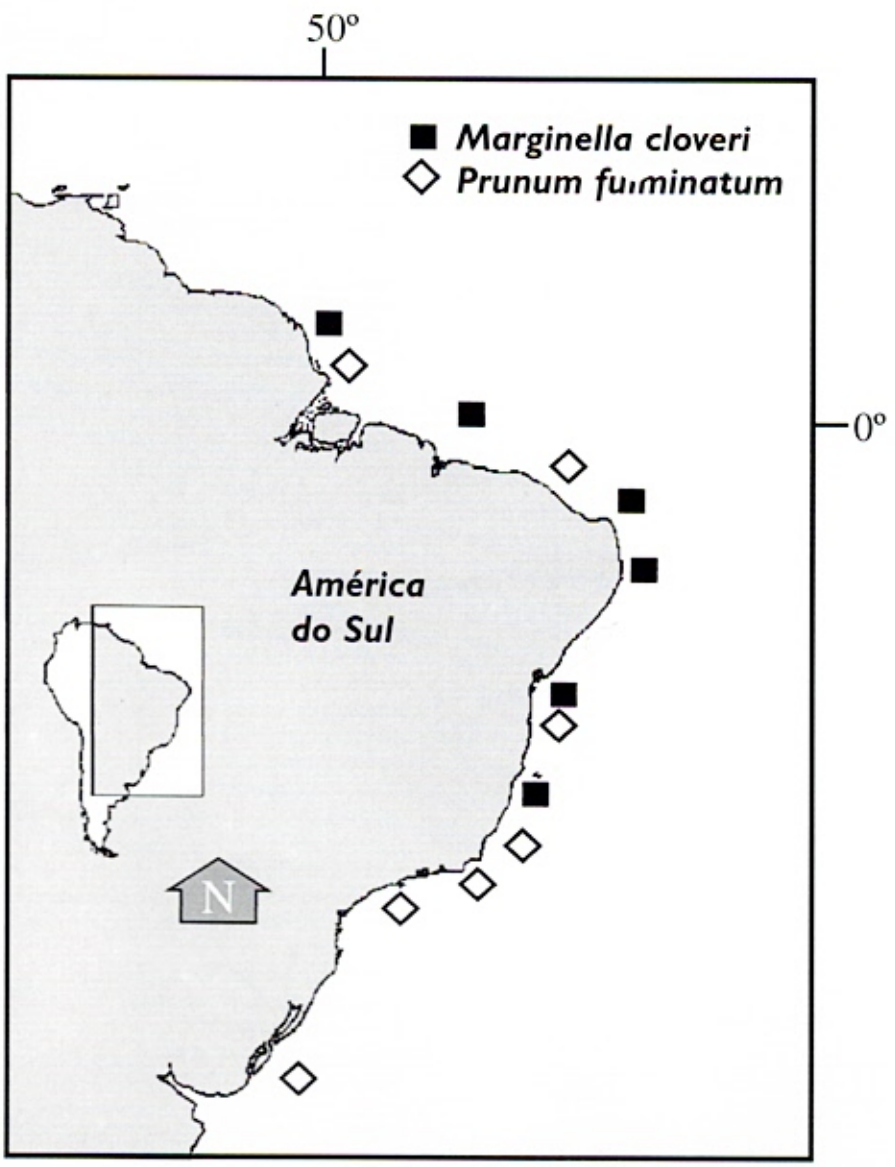

Lista de Macromoluscos Coletados por Barcos de Pesca de Arrastão ao Largo da Costa do Estado do Rio de Janeiro, Sudeste do Brasil

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Introdução:

Uma fonte há muito utilizada por pesquisadores e colecionadores, em todo o mundo, para obtenção de material malacológico, são os barcos de pesca que utilizam redes de arrasto. Várias espécies de macromoluscos são coletadas por esses barcos que por vezes acabam revelando espécies raras e, muitas vezes, desconhecidas da comunidade científica (Bail, 1996 a,b; Hadorn, 1996; Hadorn, 1997 e Snyder, 1996). Nas últimas décadas foram descritas algumas espécies novas, coletadas por barcos de pesca na costa brasileira. Como exemplo podemos citar Adelomelon riosi Clench & Turner, 1964; Perotrochus atlanticus Rios & Matthews, 1968 e Latirus devyanae Rios, P.M.Costa & Calvo, 1994. Odontocymbiola simulatrix Leal & Bouchet, 1989, foi coletado pela primeira vez pelo barco de pesca "Mestre Jerônimo" ao largo da Ilha de Santa Catarina em 1971.

No presente estudo divulgamos uma lista com 123 espécies coletadas nos últimos quinze anos por barcos de arrasto que trabalham na costa do estado do Rio de Janeiro, entre 40 e 160 metros de profundidade.

Material Examinado:

O material examinado no presente estudo encontra-se depositado nas seguintes cole es malacológicas brasileiras:

MORG – Museu Oceanográfico Prof. Eliézer de Carvalho Rios, Rio Grande, RS
IBUFRJ – Instituto de Biologia da Universidade Federal do Rio de Janeiro, RJ
CPMSC – Coleção Paulo Márcio Santos Costa, Rio de Janeiro, RJ

Lista Sistemática:

CLASSE POLYPLACOPHORA
FAMÍLIA: ISCHINOCHITONIDAE
Chaetopleura angulata (Spengler, 1797)

CLASSE GASTROPODA
FAMÍLIA: PLEUROTOMARIIDAE
Perotrochus atlanticus Rios & Matthews, 1968
FAMÍLIA: FISSURELLIDAE
Emarginula phrixodes Dall, 1927
Fissurellidae megatrema Orbigny, 1841
FAMÍLIA: TROCHIDAE
Calliotropis aeglees (Watson, 1879)
Tegula patagonica (Orbigny, 1840)
Calliostoma coppingeri (E.A.Smith, 1880)
Calliostoma militaris (Ihering, 1907)
Calliostoma carcellesi Clench & Aguayo, 1940
Calliostoma brunneopictum Quinn, 1992
Calliostoma moscatellii Quinn, 1992
Calliostoma nordenskjoldi Strebel, 1920
Calliostoma rota Quinn, 1992
Calliostoma viscardii Quinn, 1992
Solariella carvalhoi Lopes & Cardoso, 1958
FAMÍLIA: TURBINIDAE
Turbo canaliculatus Hermann, 1781
FAMÍLIA: TURRITELLIDAE
Turritella hookeri Reeve, 1849
FAMÍLIA: VERMITIDAE
Serpulorbis decussatus (Gmelin, 1791)
FAMÍLIA: CALYPTRAEIDAE
Crepidula sp.
FAMÍLIA: XENOPHORIDAE
Xenophora caribaea Petit, 1856
Xenophora longleyi Bartsch, 1931
FAMÍLIA: OVULIDAE
Cyphoma intermedium (Sowerby, 1828)
FAMÍLIA: NATICIDAE
Natica cayennensis Récluz, 1850
Natica menkeana Philippi, 1852
Natica livida Pfeiffer, 1840
Polinices lacteus (Guilding, 1833)
FAMÍLIA: TONNIDAE
Tonna galea (L., 1758)
FAMÍLIA: CASSIDAE
Phalium granulatum (Born, 1778)
FAMÍLIA: RANELLIDAE
Ranella australasia gemnifera (Euthy-me, 1889)
Ranella olearium barcellosi (Rios & Coelho, 1973)
Cymatium parthenopeum (v.Salis, 1793)
Cabestana felipponei (Ihering, 1907)
Charonia weisbordi G.Smith, 1976
Distorsio constricta macginty Emerson & Puffer, 1953
Distorsio sp.
FAMÍLIA: BURSIDAE
Bursa ranelloides tenuisculpta (Dautzenberg & Fischer, 1906)
FAMÍLIA: EPITONIIDAE
Epitonium sp.
FAMÍLIA: MURICIDAE
Urosalpinx haneti (Petit, 1856)
Cytharomorula grayi (Dall, 1889)
Trophon pelseneeri E.A.Smith, 1915
Typhis riosi Bartsch & D'Attilio, 1980
Chicoreus tenuivaricosus (Dautzen-berg, 1927)
FAMÍLIA: CORALLIOPHILIDAE

Coralliophila aberrans (C.B.Adams, 1850)
Latiaxis basilium Neme & Leme, 1978
FAMÍLIA: BUCCINIDAE
Engina sp.
Bailya sp.
FAMÍLIA: COLUMBELLIDAE
Amphissa acuminata (E.A.Smith, 1915)
Conella ledaluciae (Rios & Tostes, 1981)
FAMÍLIA: NASSARIIDAE
Nassarius sp.
Buccinanops gradatum (Deshayes, 1844)
Dorsanum moniliferum (Valenciennes, 1834)
FAMÍLIA: FASCIOLARIIDAE
Fusinus frenguelli (Carcelles, 1953)
Fusinus marmoratus (Philippi, 1846)
Latirus devyanae Rios, P.M.Costa & Calvo, 1994
Leucozonia sp.
Metula anfractura Matthews & Rios, 1968
FAMÍLIA:VOLUTIDAE
Zidona dufresnei (Donovan, 1823)
Adelomelon beckii (Broderip, 1836)
Odontocymbiola cleryana (Petit, 1856)
Odontocymbiola macaensis Calvo & Coltro, 1997
Odontocymbiola saotomensis Calvo & Coltro, 1997
Odontocymbiola simulatrix Leal & Bouchet, 1989
FAMÍLIA: OLIVIDAE
Olivancillaria urceus (Röding, 1798)
Olivancillaria vesica vesica (Gmelin, 1791)
Ancilla dimidiata (Sowerby, 1850)
Olivella defiorei Klappenbach, 1964
Agaronia travassosi Morretes, 1938
FAMÍLIA: MARGINELLIDAE
Prunum fulminatum (Kiener, 1841)
Prunum martini (Petit, 1853)
Prunum rubens (Martens, 1881)
FAMÍLIA: CANCELLARIIDAE
Cancellaria petuchi Harasewych, Petit & Verhcken, 1992
FAMÍLIA: CONIDAE
Conus sanderi Wils & Moolenbeck, 1979
Conus centurio Born, 1778
Conus clerii Reeve, 1844
Conus mazei Deshayes, 1874
Conus mindanus Hwass, 1792
Conus tostesi Petuch, 1986
Conus villepini Fischer & Bernardi, 1867
FAMÍLIA:TURRIDAE
Brachytoma rioensis (E.A.Smith, 1915)
Polystira formosissima (E.A.Smith, 1915)
Cochlespira radiata (Dall, 1889)
Fusiturricula lavinoides (Olsson, 1922)
Fusiturricula maesae Rios, 1985
Buchema interpleura (Dall & Simpson, 1901)
Carinodrillia braziliensis (E.A.Smith, 1915)
Glyphostoma epicasta Bartsch, 1934
Pleurotomella aguayoi (Carcelles, 1953)
FAMÍLIA:ARCHITECTONICIDAE
Architectonica nobilis Röding, 1789
Heliacus bisulcatus (Orbigny, 1845)
Philippia uruguaya (Carcelles, 1953)
FAMÍLIA: CYLICHNIDAE
Scaphander darius Marcus, 1967

CLASSE BIVALVIA

FAMÍLIA: NUCULIDAE
Nucula puelcha Orbigny, 1846
FAMÍLIA: NUCULANIDAE
Nuculana larranagai Klappenbach & Scarabino, 1968
Adrana electa (A.Adams, 1846)
FAMÍLIA:ARCIDAE
Lunarca ovalis Bruguière, 1789
FAMÍLIA: GLYCYMERIDAE
Glycymeris longior (Sowerby, 1833)
FAMÍLIA: PLICATULIDAE
Plicatula gibbosa Lamarck, 1801
FAMÍLIA: OSTREIDAE
Ostrea cristata Born, 1778
FAMÍLIA: PECTINIDAE
Chlamys tehuelchus (Orbigny, 1846)
Leptopecten bavayi (Dautzenberg, 1960)
Nodipecten nodosus (L., 1758)
Pecten ziczac (L., 1758)
FAMÍLIA: CRASSATELLIDAE
Crassatella riograndensis Vokes, 1973
FAMÍLIA: CARDIIDAE
Trachycardium manoeli Prado, 1993
FAMÍLIA: MACTRIDAE
Mactra petiti Orbigny, 1846
FAMÍLIA:TELLINIDAE
Tellina trinitatis (Tomlin, 1929)
FAMÍLIA: SEMELIDAE
Semele modesta (Reeve, 1853)
Abra aequalis (Say, 1822)
FAMÍLIA:VENERIDAE
Tivela fulminata (Valenciennes, 1827)
Tivela foresti Fischer-Piette & Testud, 1967
Tivela isabelleana Orbigny, 1846
Pitar rostratus (Koch, 1844)
Transepitar americana (Doello-Jurado, 1951)
FAMÍLIA: HIATELLIDAE
Panopea abbreviata Valenciennes, 1839

CLASSE CEPHALOPODA

FAMÍLIA:ARGONAUTIDAE
Argonauta nodosa Lightfoot, 1786

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SIRATUS
Conquiliologistas do Brasil

Moluscos encontrados no trato digestivo do Peixe-Morcego, Ogcocephalus vespertilio (Linnaeus, 1758) coletados na Costa do Rio de Janeiro

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Introdução:

É relativamente comum encontrarmos pequenos moluscos no trato digestivo de diversos animais marinhos, tais como, alguns moluscos e peixes. Entretanto, não sendo estes necessariamente malacófagos. No Atlântico sul ocidental estudos pioneiros foram realizados por Carcelles & Parodiz (1938), com o equinoderma *Astropecten cingulatus*, seguidos por Carcelles (1944) com *A. cingulatus*, Hass (1953) com o molusco *Aplysia brasiliana*, Pinto (1957), na descrição original do peixe, *Labrisomus trinidadensis*, Lopes (1958) com *Astropecten sp.*, Matthews (1968) com o peixe *Amphichthys cryptocentrus*, Matthews (1970) com o peixe *Malacanthus plumieri*, Rios & Oleiro (1970) com *A. cingulatus*, Matthews (1979) com *M. plumieri*, Matthews & Matthews (1979) com o equinoderma *Luidia senegalensis*, Rios, Tostes & Coelho (1979) com o peixe *Ogcocephalus vespertilio*, Sá, Leal & Coelho (1984) com o equinoderma *Holothuria grisea*, Rios & Pereira (1986) com o peixe *Callorhynchus callorhynchus* e Rios & Calvo (1987) com peixes diversos.

No primeiro estudo sobre os moluscos encontrados no trato digestivo de *Ogcocephalus vespertilio* (Rios, Tostes & Coelho 1979), cerca de 200 peixes coletados entre 40 e 60 m de profundidade foram examinados e 39 espécies de moluscos foram identificadas. No presente estudo mais de 1.000 peixes morcego foram coletados por barcos de pesca ao longo de um ano, entre a Ilha de Santana e Ilha Grande, na costa do Rio de Janeiro, entre profundidades que variaram de 50 até 140 m, nas seguintes localidades:

1 - Entre Cabo Frio e Ilha Grande - RJ, entre 100 e 140 m.
2 - Off Cabo Frio - RJ, entre 90 e 120 m.
3 - Entre Ilha Rasa e Ilha Grande - RJ, entre 50 e 60 m.
4 - Entre Cabo Frio e Ilha de Santana - RJ, entre 60 e 90 m.

As seguintes espécies foram identificadas:

Concha/Estação	
CLASSE: Gastropoda	
FAMÍLIA: Trochidae	
Dentistyla dentiferum (Dall, 1889)	1 - 2
Tegula patagonica (Orbigny, 1840)	2 - 3
Calliostoma carcellesi Clench & Aguayo, 1940	2
Calliostoma brunneopictum Quinn, 1992 *	3 - 2
Calliostoma viscardi Quinn, 1992	1
Calliostoma aff. nordeskjoldi Strebel, 1920	1 - 3
Calliostoma militaris (Ihering, 1907) *	1
Calliostoma rota Quinn, 1992 *	3
Photinula blakei (Clech & Aguayo, 1938)	3
Solariella carvalhoi Lopes & Cardoso, 1958 *	2 - 3 - 4
Halistylus columna Dall, 1890	3
FAMÍLIA: Turbinidae	
Homalopoma linnei (Dall, 1889)	1
Arene microforis (Dall, 1889)	1- 2 - 4
FAMÍLIA: Seguenziidae	
Ancistrobasis costulata (Watson, 1879)	1
FAMÍLIA: Hydrobiidae	
Heleobia australis (Orbigny, 1835)	3
FAMÍLIA: Rissoidae	
Alvania auberiana (Orbigny, 1842)	2
FAMÍLIA: Turritellidae	
Turritella hookeri Reeve, 1849 *	3 - 4
FAMÍLIA: Calyptraeidae	
Calyptraea centralis (Conrad, 1841)	3
FAMÍLIA: Vitrinellidae	
Solariorbis sp.	4
FAMÍLIA: Naticidae	
Natica sp.	1 - 4
Natica menkeana Philippi, 1852 *	1 - 2 - 3 - 4
Natica pusila Say, 1822	2 - 3
Natica livida Pffeifer, 1840	2 - 3
Polinices lacteus (Guilding, 1833) *	3
FAMÍLIA: Ranellidae	
Cymatium parthenopeum (von Salis, 1793)	3
Cabestana felipponei (Ihering, 1907)	3
FAMÍLIA: Epitoniidae	

Epitonium sp.	3
Epitonium tenuistriatum (Orbigny, 1840)	1
Epitonium angulatum (Say, 1830)	3
FAMÍLIA: Muricidae	
Cytaromorula grayi (Dall, 1889)	1
Trophon pelseneeri E.A. Smith, 1915 *	3
Typhis cleryi (Petit, 1842)	3 - 4
Typhis riosi (Bartsch & D'Attilio, 1980)	1
FAMÍLIA: Coralliophilidae	
Coralliophila aberrans (C. B. Adams, 1850)	3
Latiaxis sp.	1
FAMÍLIA: Buccinidae	
"Prosipho" sp.	2 - 3 - 4
"Bailya" sp.	1
FAMÍLIA: Columbellidae	
Aesopus stearnsi (Tryon, 1883)	3
Amphissa cancellata (Castellanos, 1982)	1
Amphissa aff. cancellata (Castellanos, 1982)	1 - 2 - 3 - 4
Amphissa acuminata (E.A. Smith, 1915) *	2 - 3 - 4
Anachis obesa (C. B. Adams, 1850)	3
Anachis isabellei (Orbigny, 1841)	3
"Anachis" sp. *	2 - 3
FAMÍLIA: Nassaridae	
Nassarius albus (Say, 1826) *	1 - 2 - 3 - 4
Buccinanops gradatum (Deshayes, 1844)	3
FAMÍLIA: Fasciolariidae	
Fusinus frenguelli (Carcelles, 1953)	2 - 3 - 4
Latirus devyanae Rios, P. M. Costa & Calvo, 1994	3
Metula anfractura Matthews & Rios, 1968	2
FAMÍLIA: Olividae	
Olivancillaria urceus (Röding, 1798) *	3
Ancilla dimidiata (Sowerby, 1850) *	1 - 2 - 3 - 4
Olivella defiorei Klappenbach, 1964	1 - 2 - 3 - 4
Olivella minuta (Link, 1807)	3
Olivella sp.	1
Olivella riosi Klappenbach, 1991	2 - 3 - 4
Olivella puelcha (Duclos, 1840) *	3
Olivella tehuelcha (Duclos, 1840)	3
FAMÍLIA: Marginellidae	
Dentimargo janeiroensis (E.A. Smith, 1915)	2 - 3
Persicula aff. sagittata (Hinds, 1844)	1 - 2
Prunum sp.	1 - 3 - 4
Prunum martini (Petit, 1853) *	1 - 2 - 3 - 4
Volvarina bahiensis (Tonlin, 1917)	1
Volvarina sp.	1
FAMÍLIA: Cysticidae	
Granulina sp.	3
FAMÍLIA: Coniidae	
Conus aff. mindanus Hwass, 1792	3
FAMÍLIA: Turridae	
Clathrodrillia sp.	3
Brachytoma rioensis (E.A. Smith, 1915) *	1 - 4
Cerodrillia thea (Dall, 1883)	3 - 4
Cerodrillia perryae Bartsch & Rehder, 1939	3
Cerodrillia sp.	3
Drilliola comatotropis (Dall, 1881)	1 - 3 - 4
Leptadrillia cookei (E.A. Smith, 1888)	1
Spirotropis lithocolleta (Watson, 1881) *	1
Spirotropis stirophora (Watson, 1881)	3 - 4
Splendrillia espyra (Woodring, 1928)	1
Splendrillia lissotropis (Dall, 1881)	2
Polystira formosissima (E.A. Smith, 1915)	2- 3 - 4
Fusiturricula lavinoides limonensis (Olsson, 1922) *	1 - 2 - 3 - 4
Pyrgospira sp.	3
Buchema interpleura (Dall & Simpson, 1901)	3
Buchema sp.	3
Carinodrillia braziliensis (E.A. Smith, 1915) *	1 - 2 - 3
Compsodrillia acestra (Dall, 1889)	3
Compsodrillia gundlachi (Dall & Simpson, 1901)	3
Mitrolumna sp.	1 - 2 - 3
Glyphostoma epicasta (Bartsch, 1934)	1
Nannodiella vespuciana (Orbigny, 1842)	3
Cryoturris adamsi (E.A. Smith, 1884)	3
Cryoturris serga (Dall, 1881)	1
Ithycythara lanceolata (C. B. Adams, 1850)	2 - 3
Kurtziela sp.	3
Kurtziela rhysa (Watson, 1881)	1 - 3 - 4
Daphnella corbicula Dall, 1889	1
Pleurotomella aguayoi (Carcelles, 1953) *	1 - 2 - 3
Veprecula morra (Dall, 1881)	3
FAMÍLIA: Terebridae	
Terebra brasiliensis (E.A. Smith, 1873) *	1
Terebra duellojuradoi Carcelles, 1953 *	3
Terebra sp. *	3
FAMÍLIA: Architectonicidae	
Heliacus bisulcatus (Orbigny, 1845) *	3
Architectonica nobilis Röding, 1798	1
Philippia uruguaya (Carcelles, 1953)	1
FAMÍLIA: Pyramidellidae	
Odostomia sp.	3
Turbonilla spp.	3
FAMÍLIA: Acteonidae	
Acteon pelecais Marcus, 1981 *	3
Mysouffa cumingii (A. Adams, 1854)	1 - 3 - 4
"Rictaxis" sp.	1
FAMÍLIA: Cylichnidae	
Cylichna discus Watson, 1883	4
Scaphander darius Marcus, 1967	1
FAMÍLIA: Philinidae	
Philine sp.	3
FAMÍLIA: Retusidae	
Pyrunculus caelatus (Bush, 1885)	2 - 3
Volvulella sp.	2
CLASSE: Pelecypoda	
FAMÍLIA: Nuculidae	
Nucula larranagai Klappenbach & Scarabino, 1968	1 - 3
FAMÍLIA: Pectinidae	
Leptopecten bavayi (Dautzenberg, 1900)	3
Propeamussium sp.	1
FAMÍLIA: Semelidae	
Abra aequalis (Say, 1822)	1 - 3
FAMÍLIA: Corbulidae	
Corbula caribaea Orbigny, 1842	2 - 4
FAMÍLIA: Cuspidariidae	
Cardiomya cleryana (Orbigny, 1846) *	4

* espécies registradas também por Rios, Tostes & Coelho (1979).

Discussão:

Os moluscos estudados por Rios, Tostes & Coelho (1979), foram retirados de peixes-morcego coletados numa

área que vai do Cabo de São Tomé no norte do estado do Rio de Janeiro até a foz do Rio Doce no estado do Espírito Santo, numa única campanha, a uma profundidade que variou entre 40 e 60 m. Enquanto que, para o presente estudo mais de oito campanhas foram realizadas durante dez meses, entre a Ilha de Santana no norte do estado do Rio de Janeiro e a Ilha Grande situada ao sul do mesmo estado, a uma profundidade que variou de 50 a 140 m.

O peixe-morcego não deve ser considerado um peixe malacófago pois, sua dieta inclui outros invertebrados além de moluscos, tais como, ofiúros, vermes e pequenos crustáceos, na sua maioria paguros. Fato este que contribuiu para aumentar consideravelmente o número de espécies de moluscos encontrados em seu trato digestivo, já que a maior parte das conchas encontrava-se habitada por esses pequenos crustáceos. Matthews (1968), observou que o peixe pacamon não se alimenta de Toxoglossa (moluscos predadores que possuem glândula de veneno), enquanto que o peixe-morcego havia ingerido algumas espécies pertencentes a este grupo. Isto ocorreu provavelmente por ser o pacamon um peixe malacófago, ingerindo somente moluscos vivos, que por isso evita os Toxoglossa. Enquanto que o peixe-morcego alimenta-se de outros invertebrados, inclusive paguros, que podem habitar conchas vazias de Toxoglossa.

O presente estudo adiciona 92 espécies ao estudo anterior (Rios, Tostes & Coelho, 1979), no qual foram identificadas 39 espécies, perfazendo um total de 131 spp., das quais 26 tiveram sua ocorrência repetida. Alguns espécimens foram mal identificados no primeiro estudo, por estarem atacados pelo suco gástrico do peixe ou por se tratarem de espécies novas, muito afins a espécies conhecidas dificultando assim sua correta identificação. Tais espécimens foram reidentificados para este trabalho.

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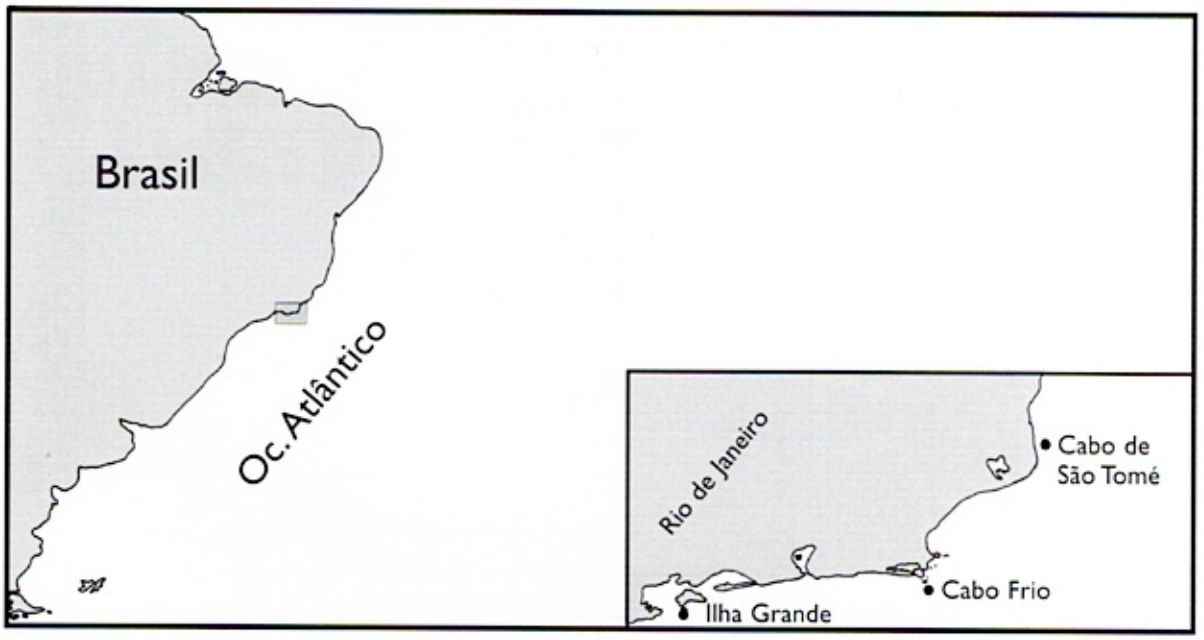
Área de Estudo



Conus bertarollae