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THREE NEW SPECIES OF SCISSURELLIDAE (Gastropoda, Prosobranchia) FROM THE COAST OF BRAZIL(*)

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SYNOPSIS

A consultation of the original descriptions of the genera of Scissurellidae led the author to conclude that the valid names for the genera of this family are: *Scissurella* d'Orbigny, 1823 (redescription by Sowerby, 1824), *Anatoma* Woodward, 1859, *Incisura* Hedley, 1904, *Scissurona* Iredale, 1924, *Sinezona* Finlay, 1927.

Scissurella and *Anatoma* are cosmopolites, the first generally living in shallow waters, associated to sea-weeds, while the second is found in deep waters. The three last genera are restricted to Australasia.

Three new species are described from the Brazilian coast: *Scissurella alexandrei*, *Scissurella electilis* and *Scissurella morretesi*. The internal anatomy of *S. alexandrei* is described.

These three new species have been found in littoral shallow waters, the two first on the northeast Brazilian coast, the third on the coast of the State of São Paulo. The fourth known species of Scissurellidae from Brazil, *Anatoma aëdonia* (Watson, 1886), was dredged by H.M.S. "Challenger", in 1873, off Pernambuco, 350 fm (640 m).

Two of the three species of Scissurellidae presented have been found in sea-weed samples from the lower mesolittoral (level: 0.0 to 0.2 m), collected to study the fauna of marine motile invertebrates inhabiting sea-weeds on the Brazilian coast, from Fortaleza (Ceará) to Torres (Rio Grande do Sul). This study will be the subject of my Ph.D. thesis, to be presented later, and has been supported by the "Fundação de Amparo à Pesquisa do Estado de São Paulo" since 1967.

The third species was found in the collection of Mollusca of the Museum of Zoology, University of São Paulo, without any indication of the biotope in which it was found.

While trying to include these three species in a definite genus, I verified that the literature about Scissurellidae was most confused (cf. Thiele, 1931, p. 30; Wenz, 1938, p. 172; Keen, 1960, p. 1221), and I tried to clear it by consulting the original descriptions.

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I concluded thus that the valid names for the genera of Scissurellidae are:

1 - *SCISSURELLA* d'Orbigny, 1823

(= *Schismope* Jeffreys, 1856; = *Woodwardia* Crosse & Fischer, 1861).

TYPE-SPECIES - *Scissurella laevigata* d'Orbigny, 1823.

DIAGNOSIS - Shell small,spire depressed,more or less excentric, selenizone generally reflected and present only on the last whorl, without slit in young, slit open in half-grown, and closed, forming a foramen, in adult animals. (The presence of a foramen is not discriminative,and the opinion according to which *Schismope* would be a valid genus on account of the presence of this characteristic is not acceptable after the redescription of *Scissurella* by Sowerby (1824)).

DISTRIBUTION - Cosmopolite.

BASIC REFERENCES - d'Orbigny, 1823; Sowerby, 1824; Jeffreys, 1856a; 1856b; 1856c; Woodward, 1856; 1856a; 1859; Crosse & Fischer, 1861.

2 - *ANATOMA* Woodward, 1859.

(= *Schizotrochus* Monterosato, 1877).

TYPE-SPECIES - *Scissurella crispata* Fleming, 1828.

DIAGNOSIS - Shell small, turbinate or trochiform, carinate; spire high and centric; selenizone on upper half of the whorls, generally visible on all the whorls, slit always open.

DISTRIBUTION - Cosmopolite.

BASIC REFERENCES - Woodward, 1859; Monterosato, 1877.

3 - *INCISURA* Hedley, 1904.

TYPE-SPECIES - *Scissurella lytteltonensis* Smith, 1894.

DIAGNOSIS - Shell small, robust, auriform and smooth; spire very excentric; no carina; slit short.

DISTRIBUTION - New Zealand.

BASIC REFERENCES - Hedley, 1904; Bourne, 1910.

4 - *SCISSURONA* Iredale, 1924.

TYPE-SPECIES - *Scissurella rosea* Hedley, 1904.

DIAGNOSIS - Shell small, fragile and translucent; spire slightly elevated and very excentric; collabral riblets thin; slit conspicuous.

DISTRIBUTION - Australasia.

BASIC REFERENCES - Hedley, 1904; Iredale, 1924.

5 - *SINEZONA* Finlay, 1927.

TYPE-SPECIES - *Scissurella brevis* Hedley, 1904.

DIAGNOSIS - Shell small, turbinate; spire relatively high and centric; selenizone short and without any reflexion; slit closed forming a foramen in outer lip.

DISTRIBUTION - New Zealand.
BASIC REFERENCES - Hedley, 1904; Finlay, 1927.

Although most descriptions of new species, as well as quotations of these, generally neither refer to the biotope where the animals were collected, nor tell whether they were alive or dead shells,I think that Jeffreys' observation (1856a, p. 321): "All the species of (the group of *Scissurella crispata* - now genus *Anatoma*) apparently inhabit deep water" is confirmed by posterior observations. On the other hand, our knowledge of the habitat of the true *Scissurella* (in modern sense, not Jeffreys') leads us to believe that this group inhabits preferencially the coastal Phytal. Among the species certainly associated with sea-weeds can be cited the type-species *Scissurella laevigata* d'Orbigny (d'Orbigny, 1823; Vayssière, 1894) and *Scissurella costata* d'Orbigny (d'Orbigny, 1823; Nobre, 1938-40; Nicklès, 1950; Ledoyer, 1962; 1966). These two species have been on several occasions considered as synonymous (Paetel, 1888). Vayssière (1894, p. 22) disagreed with that point of view. Anyway, the abundant synonyms of *S. costata* probably hide a lot of confusions, as can be appreciated by the comparison between the descriptions and illustrations given by several authors under the same specific name: Vayssière (1894), Nobre (1938-40), Nicklès (1950), who maybe dealt with different forms, at least in the case of Nobre (*op.cit.*, p. 470, pl. 19, fig. 21) who must have called *S. costata* what was really *Anatoma crispata* or a species close to it.

Another species has been found in sea-weeds by Warmke & Abbott (1961) in the West Indies, and is of particular interest for me, for zoogeographical reasons: *Schismope cingulata* O.G. Costa, 1861. These authors call this species "a commom shallow-water species found living on algae clinging to mangrove roots" (*op.cit.*, p. 35). Unfortunately, the illustration and the short description by Warmke and Abbott do not permit a sufficiently detailed comparison with the animals I have found on Brazilian sea-weeds, though in a biotope quite different from mangrove, that is, in low sublittoral sea-weeds from the reef inner-sea in the Brazilian northeast. On the other hand, this difference might not be as great as it seems, if we consider that both biotopes are protected from the open-sea and its turbulence,and are periodically invaded by the high tides. However, in the case of the *Scissurella* I have found, the sea-weed biotope in which they have been collected is never exposed to air, unless exceptionally low tides occur. The original description of *Scissurella cingulata* (O.G. Costa, 1861, p. 61-62, pl. 12, figs. 9-A, 9-B) refers to a minute shell (0.70mm), slightly depressed, provided by 11 or 12 axial costae by whorl. Such a species differs clearly from the Brazilian *Scissurella* I have seen.

The first two new species described below have been isolated from several samples of sea-weeds that have been treated as follows:

- two hours in an anesthesic solution composed of one volume of aqueous solution of magnesium chloride at 35°/oo and one volume of sea-water;

- fixation with formaline at 7% of the whole sample, which has been then brought to the laboratory;
- separation of the fauna, which has been preserved in alcohol at 70° GL.

The description of interne anatomy has been made by observation of seven specimens, before, during and after staining and diaphanization. The animals were maintained in a solution of Raillet & Henry, during 15 minutes, long enough to remove completely the thin calcium carbonate layer of the shells.

After observation of the animals at that stage of treatment, they were stained with acetic carmine during 1 minute and differentiate with glacial acetic acid. After staining, they were diaphanized by Faia creosote.

The whole process was observed under a binocular microscope and several drawings were made to show the progressive appearance of the internal organs, which is not synchronic.

The radula has been isolated with potassium hydroxide at 10% overnight, stained with hot Congo red and mounted in glycerine. Figures 5 and 6 were obtained from a sequence of preliminary drawings,and are the result of repeated observations. Measurements were made by combination of a millimetric ocular and a graduated glass plate.

SCISSURELLIDAE OF THE BRAZILIAN COAST

The only known representative of the Scissurellidae found in Brazilian waters was dredged in 1873 by H.M.S. "Challenger" (Watson, 1886): *Scissurella aëdonia* Watson,1886; Lat. 9°5'S, Long. 34°50'W,off Pernambuco; 350 fm (640 m). Red mud.

The very precise description and illustration of this species by Watson (p. 114; pl. VIII, fig. 3) and the fact that it has been found in deep water, leads me to assign it to the genus *Anatoma* Woodward, 1859.

It presents a trochiform shell, high and centric spire, 5 whorls; slit open and selenizone forming a carina all around the whorls till the apex.

SCISSURELLA ALEXANDREI, sp. n.

Figs. 1-7

Shell globose, fragile, opaque white, reticulate; base tumid; three complete whorls, the first slightly depressed, the last opening widely. External lip thin, continuous except for the cut of the slit, which does not show any reflection. Umbilicus deep but narrow, bordered by an inconspicuous crest from the parietal region of the base and half-covered by the reflected parietal lip. Sculpture consisting of axial costae and spiral threads: from the apex to the beginning of the selenizone, well developed axial costae determine a polygonal profile in that region; intercostal bands concave; at the beginning

of the selenizone, the costae become less elevated, and cross with the spiral threads, forming a network with lozenge-shaped reticulation in the superior part of the third whorl, and trapezoidal, till three times as broad as high, in the basal part. Three to four spiral threads up to the selenizone and slit, and from twelve to fourteen below. A wider band separates the selenizone from the first spiral thread just inferior to it. Selenizone beginning at the end of the second whorl, not forming a carina. Slit open, occupying a length of four to six intercostal bands, situated at the superior fourth of the margin. Operculum corneous, transparent and very thin, circular, presenting from seven to eight spiral whorls, one close to the other and almost equally spaced, the last not being markedly larger than the others.

ANATOMY - (Figs. 5-6) - Head voluminous, with a moderately long, triangular snout (*sn*), the mouth opening on the inferior side of it. A pair of cephalic tentacles (*ct*) located laterally to the snout, the left one slightly longer than the right, covered by small papillae "somewhat like the pinnules of the tentacles of an Alcyonarian polyp" (Bourne, 1910, p. 4, fig. 27-28). A pair of large black eyes (*e*), without peduncle, situated on prominences at the base of the cephalic tentacles. Mantle (*mt*) large and ciliated, involving the body and, in contracted specimens, completely covering the head. Mantle margin ciliated and smooth, running close to the lips of the shell, with a slit (*ms*) on the right side provided with a very short palleal cirrus (*pc*). Visceral spire rather short and attenuate.

Foot short and, in the fixed specimens I could observe, completely folded. Epipodium apparently without any papilla, bearing on the right side two short tentacles (*ept*): the anterior one cylindrical, ending with a tuft of sensorial papillae like those of the cephalic tentacles, but smaller; the second cylindrico-conical, shorter, covered entirely with papillae. Muscular lobe of the operculum placed on the posterior region of the epipodium.

Two columellar muscles, one on each side above the posterior region of the foot, the left one smaller and rounder than the right (*rcm*); this has the form of a crescent.

The palleal complex, in the mantle cavity,includes, adhering to the mantle roof, the terminal part of the rectum (*rec*) which ends by the anus (*an*) close to the slit and, in contracted specimens,just behind the right eye. In animals not yet stained, the rectal duct appears very clearly by transparence and has a whitish color that stands out against the light brown of the rest of the body. Under the left part of the mantle lies the hypobranchial gland (*hygl*), according to the terminology used by Bourne (1910) and Hyman (1967). Fretter & Graham (1962, p. 483, fig. 225: (*rgl*)) and Franc (1968, p. 107) call this the rectal gland, so that this term might be taken as a synonym for hypobranchial gland, besides Fretter & Graham refer also to a rectal gland (*op. cit.*, p. 233), following Pelseneer in the special case of *Scissurella*. This hypobranchial gland is very well developed to the left of the rectum and, at its right,is more compact but much less extended, forming a small dark dense

spot. Branchiae lateral, partly soldered to the mantle, the left one (*lbr*) covered by the hypobranchial gland and smaller than the right one (*rbr*). This runs from the cardiac region to the interior limit of the slit.

Pericardium (*per*) surrounding part of an intestinal loop and the heart, which is formed by the left auricle (*aul*), rather large (in spite of the smaller branchia and columellar muscle that correspond to it),a ventricle (*v*), and a right auricle (*aur*), smaller than the left one. The cardial region presents itself as a transparent, conspicuous zone in the diaphanized animal, but its details are quite difficult to be seen. The heart lies in an oblique position and offers a good example of an assymetric general arrangement of most of the organs, which are pulled to the right side.

In front of the left auricle lies the left kidney (*lk*), globose and difficult to be observed because it is partially hidden by the hypobranchial gland. Right kidney (*rk*) displaced somewhat behind and under the right auricle.

Alimentary tract beginning with the mouth, on the underside of the snout. The mandibles, according to Bourne (1910) lie at the sides of the mouth, but, maybe because they are too thin and inconspicuous,I could not find them.Radula (*ra*) of the rhipidoglossa type,as is to be expected in a primitive prosobranch (all Archaeogastropoda, except the limpets), 0.07 mm broad when completely extended, and about 0.20 mm long. The teeth of the radula (Fig. 6) are grouped in two distinct planes: the median teeth lie at an inferior plane,and the marginal ones, on both sides, are projected to a superior one and may cover completely the median teeth, forming a tube-like arrangement. Central tooth (*C*) squarish, with a cusp provided with five denticulations; its base expanded laterally and ending with a 90° angle. The three first admedian teeth (*I*,*II*, *III*) on each side of the median, are sub-triangular with cusps presenting three denticulations, and are very similar to one another; their bases are expanded assymetrically, permitting thus a strait imbrication with one and other and with the central tooth. Fourth tooth (*IV*) sigmoid, much smaller and with a single marginal denticulation. It is difficult to see because of its very narrow imbrication with tooth *III*, and because it is completely covered by the dominant tooth which is responsible for the connection between the two planes on which the radula is organized. The dominant tooth (*D*) is much larger than the others, has an almost rectangular shape and is provided with a broad cusp, three times wider than that of the central tooth, with seven sharp-pointed denticulations. In profile-view (D_1), it has a sigmoid shape. Marginal teeth (*M*) slender, twice as long as the central tooth,approximately 30 on each side. They are arranged in a fan-like manner and have small cusp supporting three minute denticulations. The radular formula is: 30-1-(4+1+4)-1-30.

The oesophagus (*oe*) begins with an oesophageal pouch (*oep*) in the posterior region of the head, runs through the body and reaches the stomach located in the visceral zone and almost completely hidden by the gonad when observed before staining. The stomach (*st*) looks like an ovoid pouch, rather large,and is refringent after staining and diaphanization. The intestine (*int*),

a long winding duct, leaves the posterior part of the stomach to run ventrally and straightforward until it reaches the region just behind the pericardium, then turns up and forms a first loop somewhat sharp in the central part of the body and another wider one which arrives in the dorsal region and is thus partially wrapped by the pericardium. It traverses the ventricle -another characteristic for lower prosobranchs (cf. Hyman, 1967, p. 271) - and becomes the rectum that runs in the mantle roof in a deeply sigmoid course that ends by the anus near the slit.

Digestive gland (*dgl*) well-developed, relatively compact, covering the right region of the body between the pericardium and the anterior part of the stomach. In animals not yet stained, this gland presents a lighter colour and shows superficially three distinct but juxtaposed lobes.

The gonad (*gon*) envelops the stomach almost completely, leaving it in contact with the dorsal surface of the visceral region only in a small area. The gonad occupies the whole visceral region, from the apex of the body to the posterior limit of the mantle cavity.

HOLOTYPE - Brazil, State of Alagoas, Maceió, Praia dos Sete Coqueiros, 8/13/1968. Collection of Mollusca of the Museum of Zoology, University of São Paulo, no. 18487.

Measurements of the holotype,in mm: height, 0.90; maximal diameter, 0.80; height of aperture, 0.55; width of aperture, 0.50.

PARATYPES - 2 exemplars, Brazil, State of Ceará, Paracuru, 3/19/1969,no. 18488; 1 exemplar, Brazil, State of Ceará,Fortaleza,Praia Meireles, 3/22/1969, no. 18489; 1 exemplar, Brazil, State of Pernambuco, Itamaracá, 2/2/1969, no. 18490; 26 exemplars, Brazil, State of Alagoas, Maceió, Praia dos Sete Coqueiros, 8/13/1968, no. 18491; 3 exemplars, Brazil, State of Alagoas, Maceió,Praia dos Sete Coqueiros, 2/7/1969, no.18492; 1 exemplar, Brazil, State of Bahia, Salvador, Praia do Rio Vermelho, 1/20/1969, no. 18493.

Measurements of the smallest paratype, in mm: height, 0.35; maximal diameter, 0.40; height of aperture, 0.30; width of aperture, 0.27.

All the specimens were found living on sea-weeds in the lowest mesolittoral.

TAXONOMIC DISCUSSION - *Scissurella alexandrei* has some resemblance to *Scissurella smithi* Thiele, 1912 (=*Scissurella jucunda* Smith, 1910, *non* Smith, 1890) from South Africa, Port Elisabeth region, (Smith, 1910, p. 207, pl.8, fig. 2-2a), with which it has the execeptionally high spire in common (in relation with the normal low spire in the genus),and the sculpture. It differs from *S.smithi* principally by the absence of any reflexion and carina of the slit or the selenizone.

The lack of a carina and reflexion of the slit turns *S. alexandrei* somewhat similar to *Sinezona brevis* (Hedley, 1904), from New Zealand, Wellington region (Hedley, 1904, p. 90, fig. 16). That species, which is the type-species of the genus *Sinezona* Finlay, 1927, has in common with *S. alexandrei* its high

and centric spire as well as the lack of reflexion of the slit, which is the most important discriminative character for the genus *Sinezona*. However, *S. alexandrei* differs from *S. brevis* by the absence of a foramen (at least in the 39 exemplars I have examined), by a narrower umbilicus and by the sculptures of the shell. I did not include *S. alexandrei* in the genus *Sinezona* principally because of zoogeographic considerations.

Five specimens collected in Maceió (8/13/1968) have been used for the study of the anatomy, and have been so far destroyed that they were considered of no use for further observation and thrown away.

The internal anatomy of *S. alexandrei* corresponds, for the main features and many details, to the anatomy of *Incisura lytteltonensis* (Smith, 1894), studied very carefully by Bourne (1910). A few and rather unimportant differences may be pointed out: in *S. alexandrei*, the digestive gland is more compact and larger, the mantle slit longer, there are but two epipodial tentacles only on the right side, the operculum is relatively larger and seems to guarantee a more functional protection to the animal when contracted to the shell. The lack of sub-ocular tentacles is surely the most important difference in *S. alexandrei*, inasmuch as it restrains the list of discriminative characters pointed out by Bourne (1910, p.30, item 3) to separate Scissurellidae from Pleurotomariidae.

The comparison between the anatomy of *S. alexandrei* and that of *Anatoma crispata* (Fleming, 1828) shows more important anatomic differences, principally the mantle border which, in *A. crispata*, is very much fringed, does not follow the aperture contour and has a V-shaped slit almost in the middle (cf. Fretter & Graham, 1962, p. 483, fig. 255).

The radula of *S. alexandrei* is very similar to that of *I. lytteltonensis* studied by Bourne (1910), except for the dominant tooth that has a more expanded base in *S. alexandrei*. The radula of *Scissurella costata*, var. *laevigata*, as shown by Vayssière (1894), is very close to that of *S. alexandrei*, but has a triangular central tooth whose base forms no angle and seems to be cut almost horizontally, and marginal teeth without denticulation.

From the comparison between the anatomy of *S. alexandrei*, *S. costata*, var. *laevigata*, *A. crispata* and *I. lytteltonensis*, I conclude that, in spite of some divergent details, the whole group is quite homogeneous with respect to their internal organization. Such a homogeneity justifies completely the tentative of Thiele (1931, p. 30) to characterize the family Scissurellidae on anatomic bases.

This species is dedicated to the memory of my friend Alexandre Valente Boffi.

SCISSURELLA ELECTILIS, sp.n.

Figs. 8-10

Shell white, faneromphalous, carinate; spire depressed and excentric, with flattened upper surface, carina in right angle, tumid outer face of the whorl

externally projected in relation to the carina.Three whorls.Aperture squarish, much expanded. Parietal lip reflected, narrow, depressed in relation to the outer lip. Outer lip smooth and thin.Umbilicus deep and very narrow. Sculpture represented only by axial costae, well developed, 22 on the last whorl, determining a polygonal profile with concave intercostal bands. Under the selenizone, a flat band destitute of sculpture, about as broad as the selenizone. Selenizone appears from the second third of last whorl on, and includes 15 conspicuous lunulae that form the edge of the carina.Slit open,short, pyriform with slightly reflected edges, located at the upper third of the outer lip.

HOLOTYPE - Brazil, State of Pernambuco, Itamaracá, 8/8/1968; collection of Mollusca of the Museum of Zoology, University of São Paulo, no. 18494.

Measurements of the holotype, in mm: height, 0.30; maximal diameter, 0.50; height of aperture, 0.30; width of aperture, 0.25.

PARATYPES - 3 exemplars, Brazil, State of Pernambuco, Ponta de Pedra, 8/30/1970; collection of Mollusca of the Museum of Zoology, University of São Paulo, no. 18501.

TAXONOMIC DISCUSSION - This new species is very closely related to *Scissurella costata* d'Orbigny, 1823 (d'Orbigny, 1823, p. 344, pl. 23, fig. 2), quite common on sea-weeds from European and Occidental African coasts. It differs from d'Orbigny's species by the presence of a band without sculpture above the selenizone, by its less lenticular shape and by its aperture, which is more expanded; it is half the size of *S. costata*, and its pyriform slit might be an indication that it is close to the adult state, in which there would be a completely closed foramen.

Scissurella cancellata Jeffreys, 1856 (Jeffreys, 1856, p. 181, pl. 2, fig. 1), considered as a synonym of *S. costata* (cf. Paetel, 1888; Vayssière, 1894), clearly presents the naked band above the selenizone and has 20 costae on the last whorl, *S. electilis* having almost the same number, i.e. 22. However, *S. electilis* is 0.5 mm broad and *S. cancellata* 1.3 mm. *S. electilis* differs from *S. cancellata* also by its less lenticular shape, its shorter selenizone and its apical whorl strictly on the same level as the carina. *S. cancellata* has spiral threads ("costellisque totidem transversis decussato") that do not exist in *S. electilis*.

The holotype, as well as the 3 paratypes, are dead shells, reason why the operculum is not described. The maximal diameter of the paratypes varies from 0.4 to 0.6 mm, other measures being proportional according to those of the holotype. They were found in sea-weed samples. The name "*electilis*" comes from the Latin and means - choice, dainty, selected.

SCISSURELLA MORRETESI, sp.n.

Figs. 11-12

Shell white, fragile, somewhat translucent, tumid; spire slightly depressed and excentric; carina weak, except in the selenizone region where it

is more marked. Two and a half whorls. Sub-circular aperture. Parietal lip forming a crescent-shaped callus; outer lip smooth, simple, but interrupted by the slit. Umbilicus deep, marginate by a little crista from the base, which corresponds to the interruption of the axial costae. Sculpture represented only by delicate but conspicuous costellae, about 50 on the last whorl. Selenizone present on the last third of the body whorl, with 15 lunulae that correspond to 15 axial costellae. Just above the selenizone, there is a narrow concave zone on the superior part of the outer face of the base, which above soon becomes markedly convex and tumid. On the last third of the body whorl, the shoulder is almost even, forming an angle with the outer face of the base. Slit with reflected edges, open, as long as 8 intercostal bands and located at the superior fourth of outer lip.

HOLOTYPE - Brazil, State of São Paulo, Ilha Bela, Baía dos Castelhanos, August 1936, Frederico Lange de Morretes col. Collection of Mollusca of the Museum of Zoology, University of São Paulo, no. 14386.

Measurements of the holotype, in mm: height, 0.50; maximal diameter, 0.65; height of aperture, 0.28; width of aperture, 0.28.

TAXONOMIC DISCUSSION - *S. morretesi* is somewhat similar to *Scissurella elegans* d'Orbigny, 1823 (d'Orbigny, 1823, p. 345, fig. 4) by its relatively high spire (higher than in *S. costata*). However, there is little likeness, and *S. morretesi* has a peculiar aspect by its weak carina and its 50 axial costellae on the last whorl.

The holotype is a single specimen and has been preserved dry since 1936, so that the operculum and soft parts are lost. The species is dedicated to its collector, malacologist Frederico Lange de Morretes.

RESUMO

Pela leitura das descrições originais dos gêneros de Scissurellidae, conclue-se que os nomes válidos destes gêneros são: *Scissurella* d'Orbigny, 1823 (redescrição por Sowerby, 1824), *Anatoma* Woodward, 1859, *Incisura* Hedley, 1904, *Scissurona* Iredale, 1924 e *Sinezona* Finlay, 1927.

Scissurella e *Anatoma* são cosmopolitas; o primeiro encontra-se geralmente em águas rasas e associado a algas; o segundo habita águas profundas. Os três últimos gêneros são restritos à Australásia.

Três novas espécies são descritas para a costa do Brasil: *Scissurella alexandrei*, *Scissurella electilis* e *Scissurella morretesi*. Da primeira foi estudada a anatomia interna. Estas três espécies novas foram encontradas em águas rasas; *S. alexandrei* e *S. electilis* provêm de amostras de algas do mesolitoral inferior.

Conhece-se uma quarta espécie de Scissurellidae para o Brasil: *Anatoma aëdonia* (Watson, 1886), dragada em 1873 pelo 'Challenger', ao largo da costa de Pernambuco, em profundidade de 640 m.

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Scissurella alexandrei, sp. n.

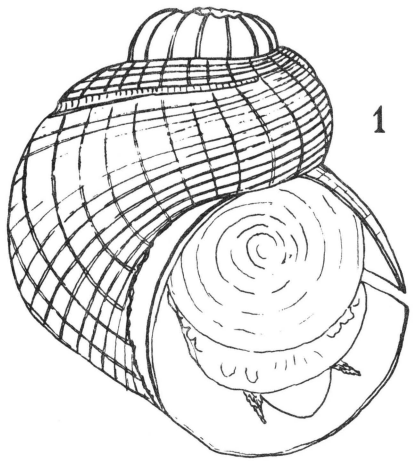
Fig. 1 - Frontal view, holotype no. 18487. *Fig. 2* - Dorsal view, holotype no. 18487. *Fig. 3* - Young specimen, as it appears when laying on its aperture, paratype no. 18491. *Fig. 4* - Young specimen, basal view, paratype no. 18491. *Fig. 5* - Anatomy: (*an*) anus; (*aul*) left auricle; (*aur*) right auricle; (*ct*) cephalic tentacle; (*dgl*) digestive gland; (*e*) eye; (*ept*) epipodial tentacle; (*gon*) gonad; (*hygl*)hypobranchial gland;(*int*)intestine; (*lbr*) left branchia; (*lk*) left kidney; (*ms*) mantle slit; (*mt*) mantle; (*oe*) oesophagus; (*oep*) oesophageal pouch; (*pc*) pallial cirrus; (*per*) pericardium; (*ra*) radula;(*rbr*) right branchia; (*rcm*) right columellar muscle; (*rec*) rectum; (*rk*) right kidney; (*sn*) snout; (*st*) stomach; (*v*) ventricle. *Fig. 6* - Teeth of the radula: (*C*) central tooth; (*I,II,III, IV*) admedian teeth; (*D*) dominant tooth, frontal view; (D_1) dominant tooth,perfile-view ; (*M*) marginal teeth; *Fig. 7* - Operculum.

Scissurella electilis, sp. n.

Fig. 8 - Frontal view, holotype no. 18494. *Fig. 9* - Dorsal view, holotype no. 18494. *Fig.10* - Basal view, holotype no. 18494.

Scissurella morretesi, sp. n.

Fig. 11- Frontal view, holotype no. 14386. *Fig. 12* - Dorsal view, holotype no. 14386.



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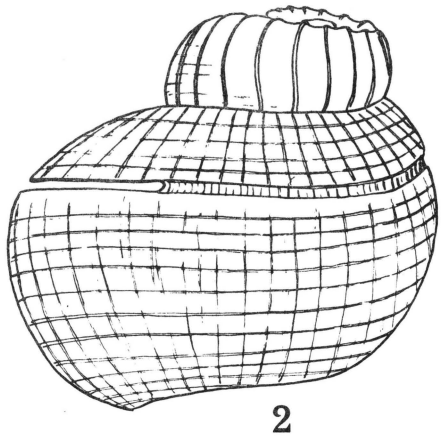

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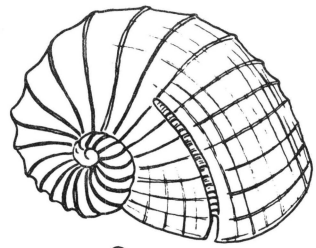

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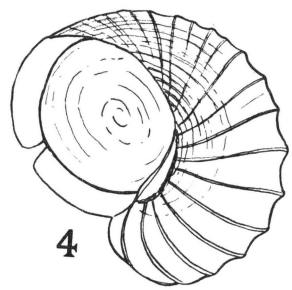

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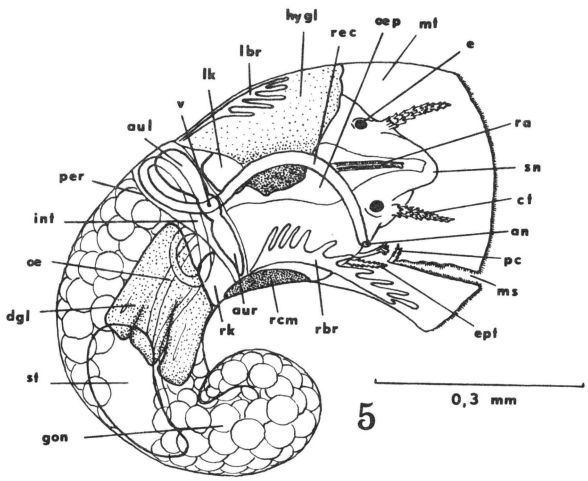

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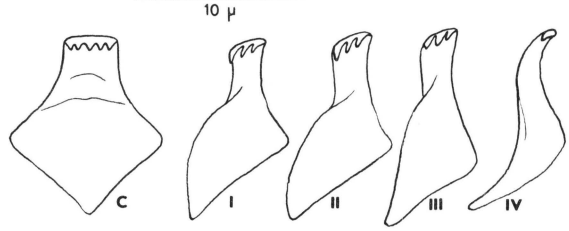

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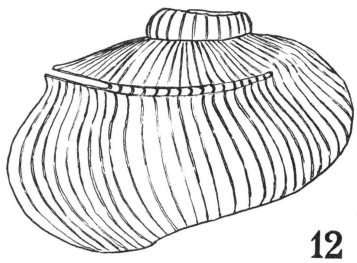

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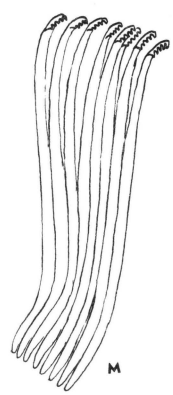

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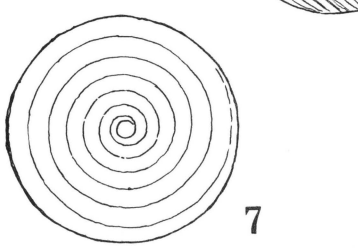

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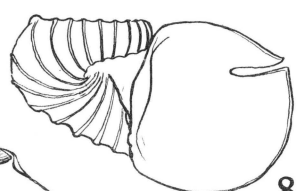

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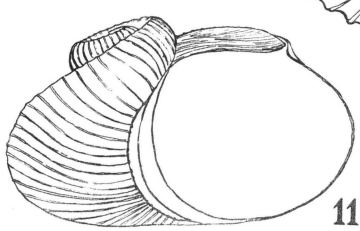

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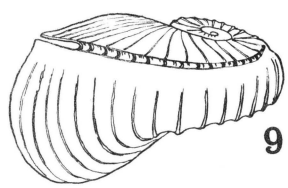

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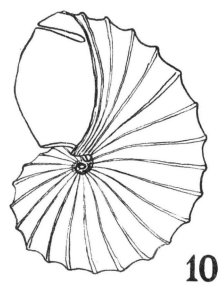

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