

## A new species of *Fasciolaria* (Caenogastropoda, Fascioliidae), from Canopus Bank, Ceará, Brazil.

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### Abstract

*Fasciolaria agatha* a new species of Canopus Bank, northeast of Brazil, collected in 60m depth, is described based on shell and operculum. The species is characterized by shell relatively elongated, whorls rounded; sculpture relatively weak and uniform; and canal narrow and long.

Key words: *Fasciolaria agatha* n. sp. Canopus Bank, Brazil, Caenogastropoda.

### Resumo

*Fasciolaria agatha*, uma nova espécie do Banco Canopus, nordeste do Brasil, coletada a 60 m de profundidade, é descrita baseada em concha e opérculo. A espécie é caracterizada pela concha relativamente alongada, voltas arredondadas, escultura relativamente fraca e uniforme e canal estreito e longo.

Palavras-chave: *Fasciolaria agatha* n. sp., Banco de Canopus, Brasil, Caenogastropoda.

### Introduction

The Fascioliidae, which occurs worldwide, includes, in general, active predators that normally prey on other mollusks, specially other gastropods. Dredges on the Canopus Bank, located off Ceará coast, N.E. Brazil, have revealed a series of new species in an uncommon gravel ecosystem. This paper deals with the description of a new species of *Fasciolaria* Lamarck, 1799.

The genus *Fasciolaria* Lamarck, 1799 (type species *Fasciolaria tulipa* Linné, 1758, from Caribbean), is one of the more important genus of the fascioliids, encompassing the members of the family of larger size. The genus has representatives worldwide, in warm and temperate waters. In the Brazilian waters, 14 species of fascioliids occur (Rios, 1994, Souza, 2002), from which two belong to the genus *Fasciolaria*: *F. tulipa* (from Caribbean Sea to north Brazil), and *F. aurantiaca* (Lamarck, 1816) (from south Caribbean Sea to Espírito Santo, Brazil).

### Systematics

Family Fascioliidae

***Fasciolaria agatha***, new species  
(Figs. 1-7)

**Types material:** Holotype MZSP 78195 (Figs. 1, 2). Paratypes MZSP 53680, MZSP 53699, all from type locality.

**Type-locality:** BRAZIL. Ceará; off Fortaleza, Canopus Bank, 2°15'214"S, 38°22'509" W, 60 m depth. (Draged, viii/2005. J. Coltro and P.M. Costa col.).

**Diagnosis:** Shell of relative small size (about 80-90 mm), narrow; wall thin, fragile. Sculpture uniform spire ribs and weak axial undulations. Canal relatively narrow and long. Aperture with weak teeth in superior region and weak fold in base of siphonal canal.

## Description

**Shell** (Figs 1, 2, 5-7). Length about 90 mm, fusiform, elongated. Color white, with brown axial strips from suture to region close to medium area of each whorl, forming infra and supra-sutural irregular brown bands, separated from each other by whitish area of approximate same width of each brown band; each brown band composed by narrow axial spots, irregularly distributed, sometimes coalescent, varying from darker to paler brown along each whorl. Last whorl similar colored, except by additional white anterior region, normally interrupted by oblique brownish band in middle region of siphon. Periostracum thin, fragile, pale beige, hairy (Fig. 5, 7); each hair short, velvet-like, showing color by transparency. Protoconch (Fig. 6, 7), white, smooth, glossy, relatively small; length about 1.5 mm; about two similar sized whorls. Limit protoconch-teleoconch well marked (Fig. 6). Teleoconch with approximately 7 convex whorls, approximate spire angle of 45°. Suture well marked; profile somewhat perpendicular. Sculpture of first teleoconch whorls composed by strong axial threads, about 10 per whorl, and 3-4 spiral cords; intersection of both marked by small node. After 3-4 whorls, gradually reticulate sculpture becoming only spiral sculpture, composed by about 25 (in penultimate whorl) ribs distributed uniformly somewhat alternate between narrower and wider ribs; each rib low and narrow, separated from each other by area equivalent to their width; minute nodes detectable on tip of each rib in some areas. Axial sculpture composed only by narrow, shallow undulations, weakly stronger close to suture. Past whorl with similar pattern of sculpture, including anterior region in siphon, spiral ribs becoming gradually oblique distally. Aperture oval; length about 1/3 of total shell length; peristome white. Outer lip with cutting edge, crenulated internally, composed by narrow ribs located perpendicular to edge, coincident with outer sculpture, becoming stringer in superior region; sub-terminal, weak, low node located in transition with siphonal canal. Inner lip mostly smooth, glossy, callus narrow, thin; superior region bearing relatively strong sup-terminal node forming narrow anal canal, this node spirally elongated, internal edge slightly taller than outer edge; from this node a series of low axial folds extending

towards inferior, gradually disappearing up to middle third of inner lip; low oblique fold located in base of siphonal canal. Canal narrow (about 1/6 of body whorl width) and long (about ¼ of total shell length), positioned straight forward. **Operculum** (Figs. 3, 4): Corneous, oval, brown, occupying entire aperture. Nucleus inferior terminal. Outer sculpture weak concentric undulations. Inner surface glossy, thicker in inferior region. Scar elliptical, located approximately in central region, weakly dislocated internally; occupying about 1/3 of total inner surface.

**Measurements of shells** (in mm): Holotype MZSP 78195= 86 by 32; Paratype MZSP 53680= 80 by 29; and two younger paratypes MZSP 53680= 22 by 11, 21 by 10.

**Distribution:** off Fortaleza, Ceará, Brazil.

**Habitat:** Muddy flats, from 60 m depth.

**Material examined:** Types.

**Etymology:** The specific epithet refers to Greek word *agathe*, meaning brown Brazilian stone, an allusion to the color of the shell.

**Discussion:** *Fasciolaria agatha* has as closer allied the species *Fusinus lighbourni* Snyder, 1984, endemic from Bermuda (183-366 m depth) (see Hadorn & Rogers, 2000; figs 82-85). Both species are similar in size and by elongated shape of the shell. However, *F. agatha* differs from *F. lighbourni* in being wider (spire angle of about 45°, while *F. lighbourni* is about 35°), aperture proportionally smaller (*F. agatha* has the apertural length about 1/3 of total length of the shell, while *F. lighbourni* the same measure is about ¼), and by sculpture, which has only narrow, shallow undulations, while *F. lighbourni* possess strong axial sculpture forming regular threads; the number of spiral cords is also different, while *F. agatha* has about 25 in penultimate whorl, *F. lighbourni* has about 10. Additionally, the aperture of *F. agatha* has folds in superior region, while this region is smooth in *F. lighbourni*. *F. agatha* has no other species that can be confused; however, it has a similar shape to the *F. tulipa* and *Fasciolaria tephрина* Souza, 2002, in having rounded whorls and somewhat narrow and long canal; *F. agatha* differs from both species in



Figs 1-7, *Fasciolaria agatha* new species: 1-2, Holotype MZSP 78195, dorsal and frontal view; scale = 10 mm; 3-4, holotype operculum, outer and inner views; scale = 5 mm; 5, paratype MZSP 53699, detail of penultimate and last whorls showing hairy periostracum; scale = 5 mm; 6, same, detail of apex in profile, protoconch and first teleoconch whorl; scale = 1 mm; 7, same, partial apical view, scale = 2 mm.

having a slender shape, lower folds in aperture and by more uniform spiral sculpture. The bathymetry is also a distinctive feature, as *F. tulipa* occurs in shallow waters, *F. tephрина* in about 600 m, and *F. agatha* in about 60 m depth.

The generic attribution of *Fasciolaria agatha* is based on the rounded shape of each whorl, the spiral sculpture and the presence of folds in the inner surface of the peristome, mainly in its superior region. Those characters allow a close relationship with the type species if the genus (*F. tulipa*), rather than that of *Fusinus* Rafinesque, 1815, *F. colus* (Linné, 1758) and other species usually considered in *Fusinus* (Snyder, 2003). This genus normally includes species with more slender shell, taller spire and longer siphonal canal; additionally, the inner surface of the peristome is usually smooth, lacking folds; all these characters are not found in *F. agatha*. Nevertheless, the systematics of the fasciolarids is not still well understood, and the generic attribution for some species, as *F. agatha*, is problematic and possibly provisional.

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