

ON THE CONSERVATION OF THE BINOMEN **DONAX HANLEYANUS**  
PHILIPPI, 1847 (BIVALVIA-MOLLUSCA)

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RESUMO - **Donax hanleyanus** Philippi, 1847 é um bivalve donacídeo que ocorre no litoral brasileiro do Estado do Espírito Santo até o Rio Grande do Sul. Essa espécie, cuja concha é extremamente variável em tamanho, cor e escultura, mantém grandes populações no ambiente instável que são as praias sujeitas a ação de ondas. Morrison em 1971 colocou a espécie na sinonímia de **Donax hilairea** Guérin, 1832. Narchi em 1975 apresentou à "International Commission on Zoological Nomenclature" uma defesa para a conservação do nome **D. hanleyanus**. A decisão da Comissão Internacional de Nomenclatura Zoológica foi: colocar o binômio **Donax hanleyanus** Philippi, 1847 na "Lista Oficial de Nomes Específicos em Zoologia"; o nome **hilairea** Guérin, 1832 como publicado no binômio **Donax hilairea** foi colocado no "Índice Oficial de Nomes Específicos Inválidos e Rejeitados em Zoologia"

ABSTRACT - **Donax hanleyanus** Philippi, 1847 occurs throughout the Brazilian littoral from Espírito Santo to Rio Grande do Sul. The shell is extremely variable in size, colour and sculpture and these animals maintain great populations in the relatively unstable environment of exposed wave-swept beaches. Morrison (1971) replaced the name **Donax hanleyanus** Philippi 1847 by **Donax hilairea** Guérin, 1832. An application for the conservation of **D. hanleyanus** was made by Narchi in 1975 for the "International Commission on Zoological Nomenclature". The decision of the International Commission on Zoological Nomenclature is: the name **hanleyanus** Philippi, 1847, as published in the binomen **Donax hanleyanus**, is hereby placed on the Official List of Specific Names in Zoology; the name **hilairea** Guérin, 1832, as published in the binomen **Donax hilairea** and as suppressed under the plenary powers, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

## INTRODUCTION

Our knowledge of the donacid bivalves from the Brazilian littoral was based mainly on the publications of Narchi (1972) on *Iphigenia brasiliensis* Lamarck, 1818; Narchi (1974) on some ecological and adaptive features of *Donax hanleyanus* Philippi, 1847, and Narchi (1978) on the functional anatomy of *D. hanleyanus*. Except for these researches all references to donacid bivalves are brief description of the shell and checklists drawn up from systematic surveys.

*Donax hanleyanus* Philippi 1847 is one of four species occurring throughout the Brazilian littoral. Its known range includes Espírito Santo State and the southern Atlantic shore line down to Argentina (Penchaszadeh & Olivier, 1975; Rios, 1985)

The species is fairly common in São Paulo, Paraná and Santa Catarina States where it is used as food by the coastal population (Gofferjé, 1950) and is known as "nanini". It is known by the name "beguara" (Ihering, 1897) in the Iguape region, but not in S. Sebastião (Morrison, 1971). Magnanini and Coimbra Filho (1964) recorded the name "sernambi" earlier used by Ihering (1968) for *Mesodesma mactroides*. Rios (1985) recorded the name "moçambique" to this species.

Living specimens were obtained from Itaguá beach, Ubatuba, on the coast of São Paulo State, Brazil by Narchi (1974, 1978) during the study on biological aspects of *D. hanleyanus*. The shell is extremely variable in size, colour and sculpture. These animals are interesting chiefly because they maintain great populations in the relatively unstable environment of exposed wave-swept beaches.

*D. hanleyanus* is one of the most widespread and common intertidal clams in São Paulo littoral (Narchi, 1978). These bivalves are constantly flushed out of the sand by the ponding surf. Their ability to overcome the stresses of the environment is based on rapid burrowing: they may completely bury themselves less than 2 seconds. The beach clams are adapted to life on exposed shores and they do not occur on protected beaches or in shallow bays (Fig. 1)

## THE SHELL

The shell of *D. hanleyanus* is wedge-shaped, moderately solid, trigonal in outline, produced anteriorly and characterized by a sharply carinated posterior ridge. The entire surface is sculptured with radial riblets, those on the disk faint, flat and narrow, those on the posterior truncation thinner and much more distinct. Crowded microscopic concentric striae traverse the surface, being much more distinct in the intercostal spaces of the posterior slope than elsewhere. The ventral margin is crenulate.

The adductor muscle scars are distinct, the anterior narrowly pyriform, the posterior transversely oval. The pallial sinus is U-shaped; the pallial line being close to

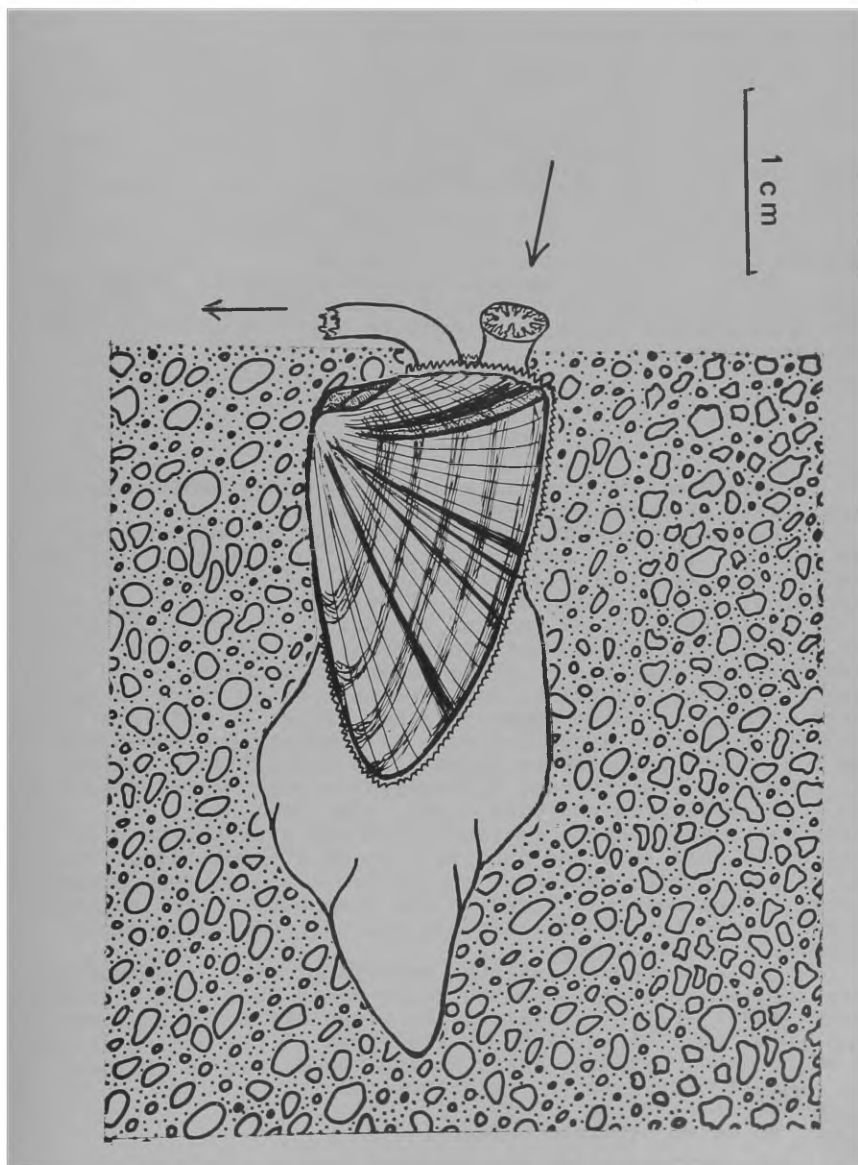


Figure 1 - *Donax hanleyanus*. External view of the left side. Living specimen with ornamented shell in the sand.

the shell margin posteriorly and more remote anteriorly. The color is dull white or sometimes buff with concentric bands and stripes of gray, lavender or pale purple; usually presenting a single or double ray of ground color diverging sharply from the beak, the ray broadening to the base.

On the hinge plate there is an oval ligamental fosset under the beak. The cardinal teeth of the left valve are subequal, divergent and united above, the socket separating them being triangular. The lateral teeth are prominent, the anterior one long. On the right valve the central cardinal is stout, the anterior one minor (Fig. 2)

Specimens of *D. hanleyanus* have an average length of 1.20-3.90 cm, height of 0.78-2.39 cm and width 0.38-0.89 cm. Such measurements agree with those of Gofferré (1950) upon the same species.

#### SYSTEMATICS

Morrison (1971) replaced the name *Donax hanleyanus* Philippi, 1847 by *Donax hilairea* Guérin, 1832.

An application for the conservation of *Donax hanleyanus* Philippi 1847 was made by Narchi in 29 September 1975 for the "International Commission on Zoological Nomenclature", according, as registered by him (1978), to Article 23, Section b, of the International Code of Zoological Nomenclature adopted by the XV International Congress of Zoology (1964): a name that has remained unused as a senior synonym in the primary zoological literature for more than fifty years is considered a forgotten name (*nomen oblitum*). Thus, *D. hilairea* not used for more than a century must be considered a *nomen oblitum* and in the interest of maintaining stability in zoological nomenclature, the name *D. hanleyanus* must be retained.

According to the *Bull. zool. Nom.*, vol. 43, p. 21, after correspondence, a revised draft was sent to the printers on 20 July 1983 and published in *Bull. zool. Nom.*, vol. 40, p. 188. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as in ten general serials and one specialist serial. No comment was received.

On 16 September 1985 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1985) 42 for or against the proposals set out in *Bull. zool. Nom.* vol. 40, p. 188. At the close of the voting period on 16 December 1985 the state of the voting was as follows:

Affirmative Votes - eighteen (18)

Negative Votes - four (4)

No votes returned - four (4)

The following are the original references to the names placed on an Official List and on Official Index by the ruling given in the present Opinion:

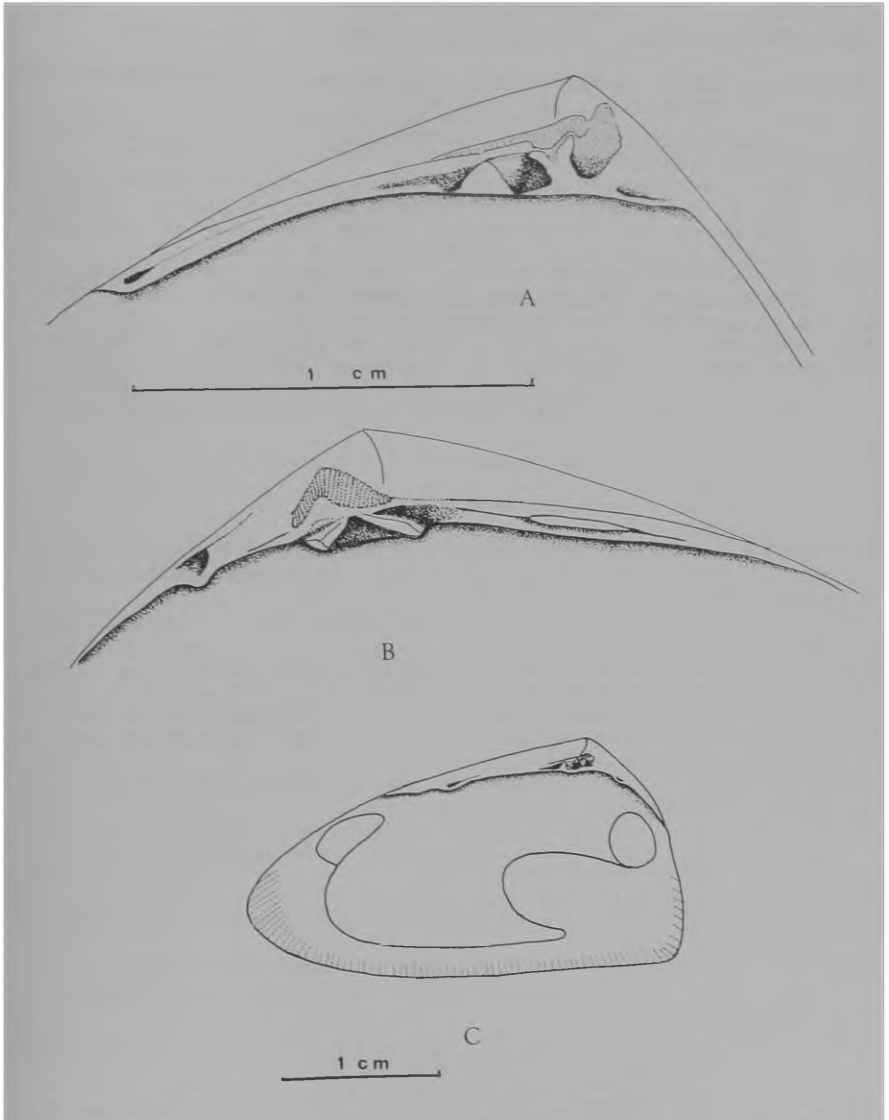


Figure 2 - *Donax hanleyanus*. Internal view of the hinge teeth. A, Right valve; B, Left valve; C, Right valve showing the pallial sinus and the adductor muscles scars.

- hanleyanus**, **Donax**, Philippi, 1847, *Zeits. f. Malakozool.*, vol. 4, p. 84.
- hilairea**, **Donax**, Guérin, 1832, *Iconographie du Règne Animal de G. Cuvier* pl. 30, fig. 4.

The decision of the International Commission on Zoological Nomenclature is:

- (1) Under the plenary power the specific name **hilairea** Guérin 1832 as published in the binomen **Donax hilairea**, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.
- (2) The name **hanleyanus** Philippi, 1847, as published in the binomen **Donax hanleyanus**, is hereby placed on the Official List of Specific Names in Zoology.
- (3) The name **hilairea** Guérin, 1832, as published in the binomen **Donax hilairea** and as suppressed under the plenary powers in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

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