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NOTES ON GEOGRAPHIC DISTRIBUTION

Mollusca, Bivalvia, Mytilidae, *Myoforceps aristatus* (Dillwyn, 1817): Distribution and new record localities at Ilha Grande Bay, Brazil

André Breves-Ramos [1*], Alexandre Dias Pimenta [2], Maria Tereza Menezes de Széchy [3] and Andrea de Oliveira Ribeiro Junqueira [1]

1 Universidade Federal do Rio de Janeiro, Centro de Ciências da Saúde, Bloco A, Instituto de Biologia, Departamento de Biologia Marinha, Laboratório de Benthos. Sala A-089. Rua Professor Rodolpho P. Rocco 221. CEP 21941-590. Rio de Janeiro, RJ, Brazil.
2 Universidade Federal do Rio de Janeiro, Museu Nacional, Departamento de Invertebrados, Setor de Malacologia. Quinta da Boa Vista, São Cristóvão. CEP 20940-040. Rio de Janeiro, RJ, Brazil.
3 Universidade Federal do Rio de Janeiro, Centro de Ciências da Saúde, Bloco A, Instituto de Biologia, Departamento de Botânica, Laboratório Integrado de Ficologia. Sala S-087. Rua Professor Rodolpho P. Rocco 221. CEP 21941-590. Rio de Janeiro, RJ, Brazil.
* Corresponding author. E-mail: *abr@biologia. ufrj.br*

ABSTRACT: In many intertidal rocky shores at Ilha Grande Bay, state of Rio de Janeiro, Brazil, the vermetid gastropod *Petaloconchus varians* is the dominant organism, forming a well-developed and complex structure, where different groups of organisms live, including the invasive bivalve *Myoforceps aristatus*. The present paper describes the distribution and new record localities of *M. aristatus* at Ilha Grande Bay.

Myoforceps aristatus (Dillwyn, 1817) is a small bivalve that bores into calcareous hard substrata, mainly shells of other mollusks (Simone and Gonçalves 2006). This species is easily identified by pointed tips at the posterior ends of the valves, which cross like fingers (About, 1974).

The geographic distribution of *M. aristatus* includes the Pacific and Atlantic Ocean (Simone and Gonçalves 2006). In the western Atlantic, the species is known from North Carolina to Florida, including the Gulf of Mexico and the northern Caribbean Sea. *Myoforceps aristatus* was first recorded on the Brazilian coast by Simone and Gonçalves (2006) in Ubatuba (state of São Paulo) and Arraial do Cabo (state of Rio de Janeiro). Later, in 2007, *M. aristatus* was reported by Silveira Jr. bioeroding shells of *Nodipecten nodosus* (Linnaeus, 1758) on the coast of the state of Santa Catarina and, in 2008, by Silva in natural and artificial substrates in Sepetiba Bay (state of Rio de Janeiro) (unpublished data).

In many intertidal rocky shores at Ilha Grande Bay (state of Rio de Janeiro, Brazil), the vermetid gastropod *Petaloconchus varians* (d'Orbigny, 1841) is the dominant organism, forming a well-developed and complex structure, where different groups of organisms live, including *M. aristatus* (Figure 1).

From April of 2008 to November of 2009, samplings were conducted in 25 locations at Ilha Grande Bay and the geographic distribution of *M. aristatus* was mapped. In each location, five quadrants of 100 cm^2 were randomly positioned at the middle zone of the *Petaloconchus varians* belt, in the intertidal rocky shore. The samples were sorted for associated fauna, evaluating the presence or absence of *M. aristatus*.

Despite faunistic studies that recorded mollusks in Ilha Grande Bay (Breves-Ramos *et al.* 2010; Oliveira and Creed 2008; Moysés *et. al.* 2007), *M. aristatus* had not been found before. At the sites herein investigated, *M. aristatus* was recorded to occur at (Figure 2): Ponta do Arame (23°00'49.66" S, 44°26'39.22" W), Ponta da Pitanga (23°01'4.91" S, 44°26'8.34" W), Ponta da Fortaleza (22°59'51.98" S, 44°25'31.28" W), Ilha Itanhangá (22°59'23.74" S, 44°24'33.96" W), Ilha Cunhambebe Grande (22°58'9.78" S, 44°24'54.26" W), Ilha Aleijado (22°58'2.23" S, 44°22'12.46" W), Ilha Capítulo (22°58'40.04" S, 44°20'21.51" W), Ilha Coqueiros (22°59'2.76" S, 44°21'6.17" W), Ilha Calombo (23°1'31.90" S, 44°18'34.28" W), Ilha Peregrino (23°01'36.60" S, 44°17'8.64" W), Ilha Cavaco (23°00'50.98" S, 44°16'9.90" W), Ilha Saracura (23°03'14.34" S, 44°16'8.91" W), Ponta Escalvada (23°01'59.71" S, 44°22'48.26" W), Ilha do Brandão (23°1'34.12" S, 44°24'1.32" W), Ilha de Búzios (23°3'27.59" S, 44°25'2.89" W), São Gonçalinho (23°03'4.80" S, 44°36'48.85" W) e Praia dos Coqueiros (23°02'14.89" S, 44°33'15.31" W); Praia do Morcego (23°07'49.95" S, 44°08'58.03" W), Ponta da Enseada (23°06'8.87" S, 44°11'27.61" W), Guriri (23°10'24.26" S, 44°05'33.33" W) and Enseada de Palmas (23°9'4.40" S, 44°07'9.56" W); Saco do Bom Jardim (23°13'13.35" S, 44°40'46.74" W) and Praia Vermelha (23°11'22.10" S, 44°38'38.24" W).

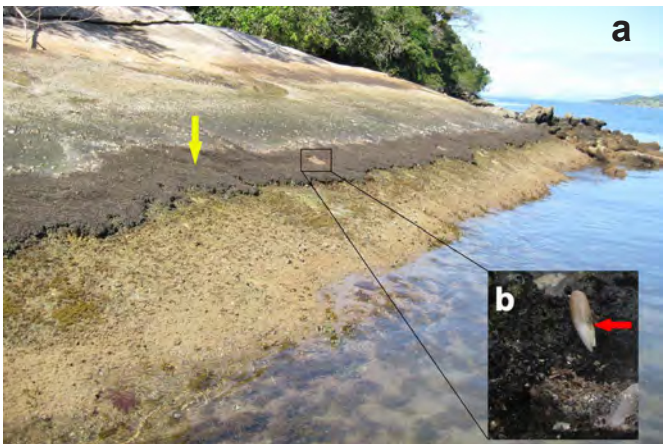

FIGURE 1. A) Intertidal vermetid at low tide (yellow arrow); B) The invasive bivalve *Myoforceps aristatus* inside the vermetid structure (red arrow).

The present work shows that *M. aristatus* is widely distributed in Ilha Grande Bay. This species was absent only from two of the 25 sites studied, in Praia de Piraquara (23°00'42.03" S, 44°26'47.10" W) and Marina (23°00'59.66" S, 44°26'27.75" W) (Figure 2).

Another invasive bivalve, *Isognomon bicolor* (C. B. Adams, 1845), was recorded to be widely distributed at Ilha Grande Bay by Oliveira and Creed (2008) and at the state of Rio de Janeiro by Breves-Ramos *et al*. (2010). As *I. bicolor*, *M. aristatus* has shown an extremely rapid range expansion, occupying the intertidal zone of the rocky shores. New studies are necessary to know the deleterious effects *of M. aristatus* on the native biota.

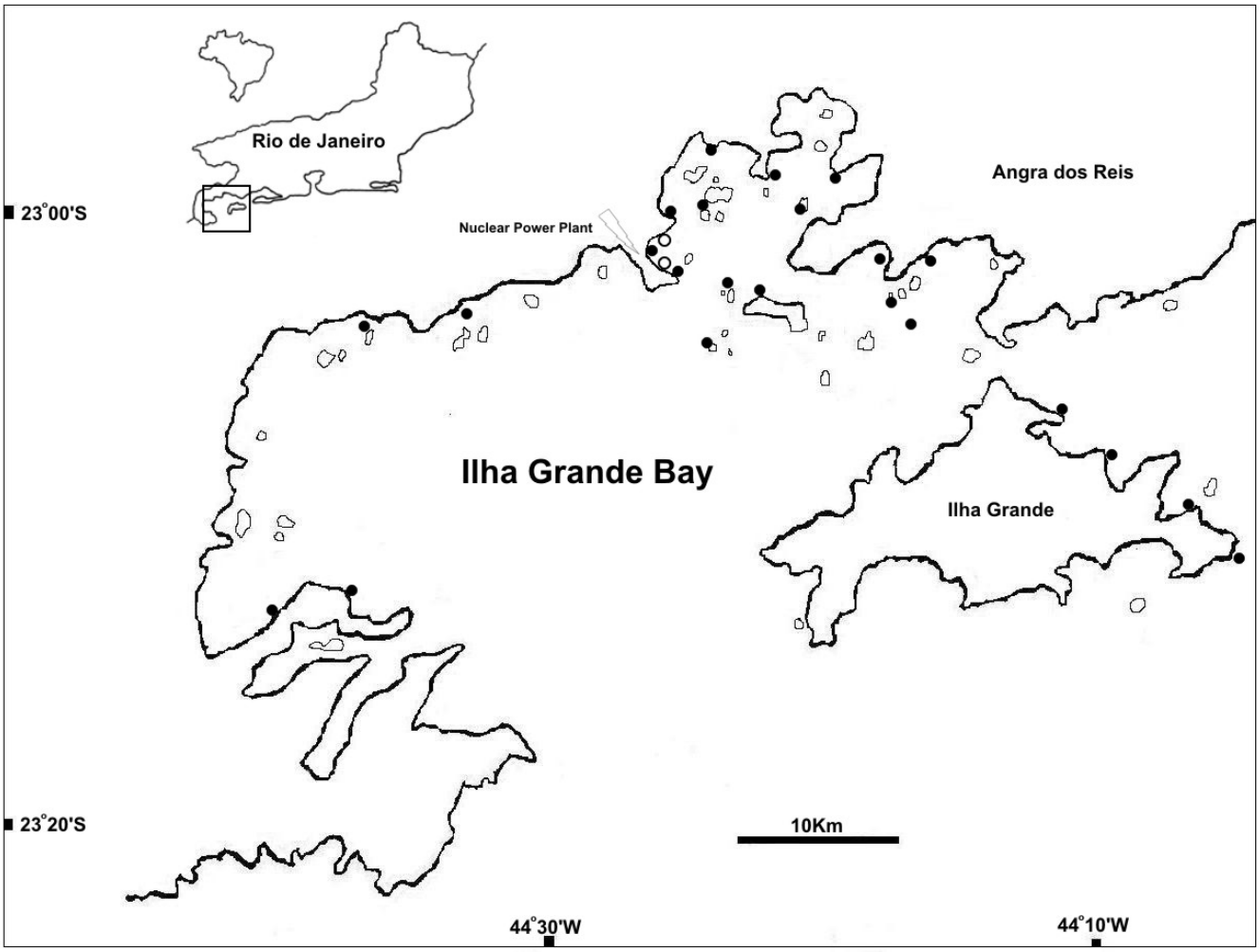

Figure 2. Map of distribution of *Myoforceps aristatus* at Ilha Grande Bay (state os Rio de Janeiro, Brazil). Closed circles = present, open circles = absent.

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