

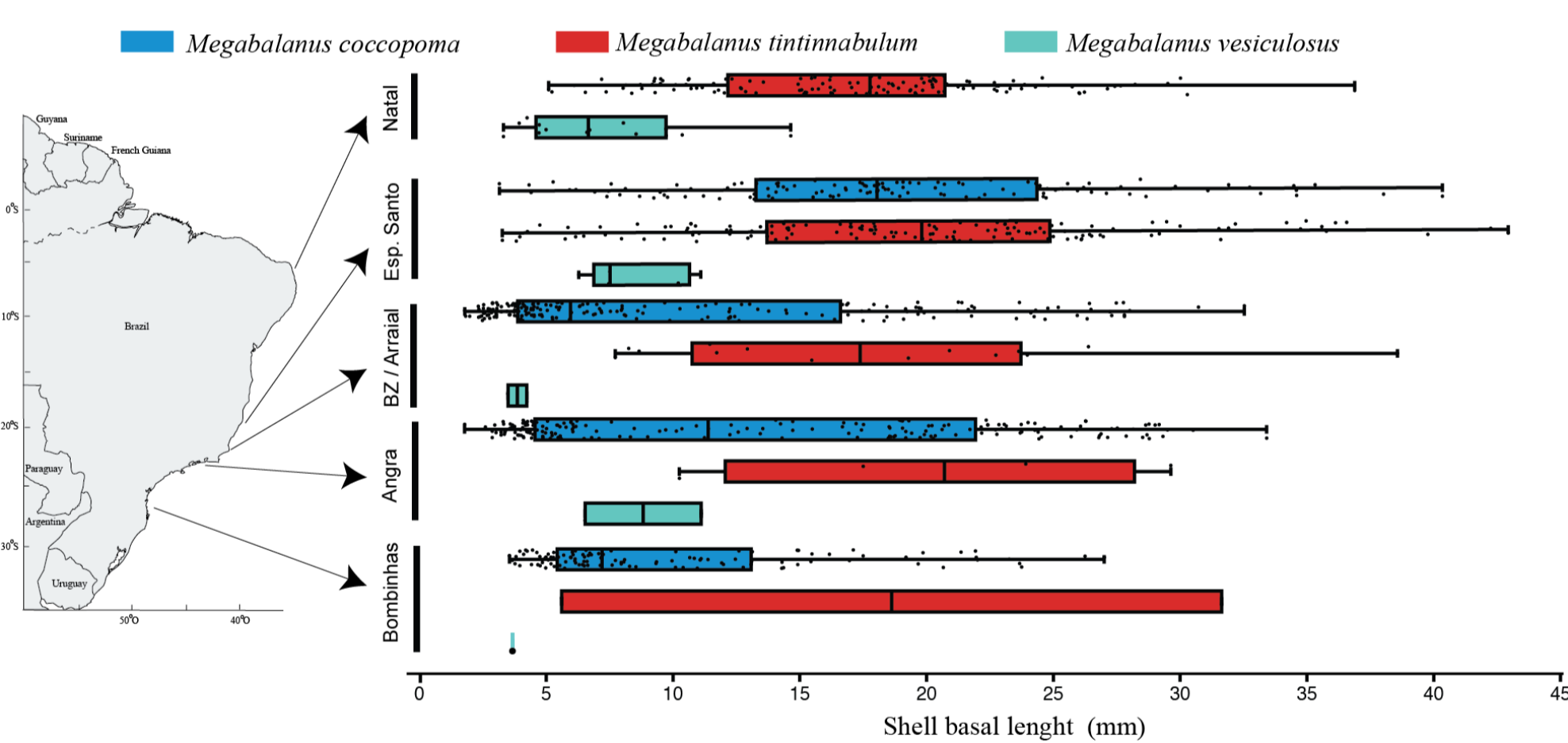
# The Role of Sea Surface Temperature on the Invasiveness of *Megabalanus* (CRUSTACEA-CIRRIPEDIA).

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## INTRODUCTION

Barnacles are conspicuous organisms on rock shores, participating as structural component on natural and artificial substrates (Newman *et al.*, 1969). Due to their ability to fix on different substrates and to have a planktonic phase it can be easily transported, expanding its original distribution. According to Carlton & Geller (1993) the transportation on ship hulls became an important vector of new barnacle introductions mediated by man in the last few centuries, and, once invading an ecosystem an alien species may participate in novel interspecific interactions, which could cause profound ecologic modification, such as exclusion or coexistence among native and introduced species.



When alien and native species are close phylogenetically and live in syntopy it gives us the opportunity to understand the life history traits capable to enhance abundance and distribution of one or another species.

Our goal is to understand the role of SST on the abundance and distribution of *Megabalanus* and to create hypothesis of new introductions on a Climate Change scenario.



## MATERIALS AND METHODS

### ADULT CULTURE:

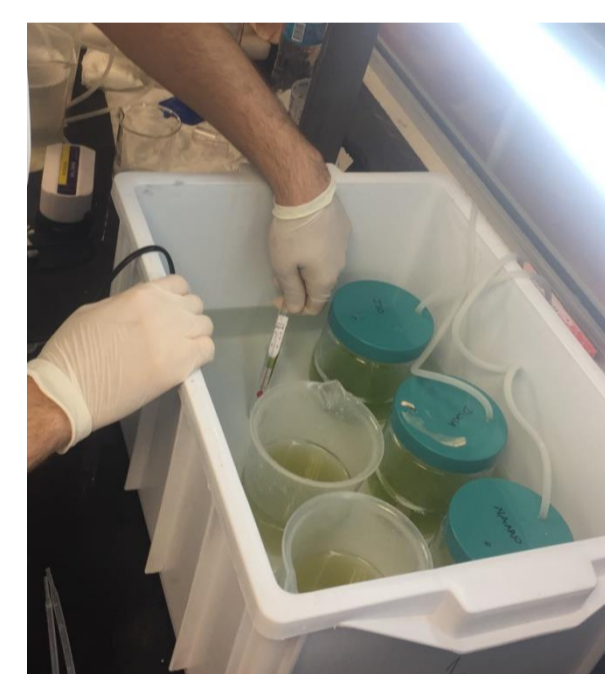
After acclimatization at 20°C for one week, the adults will have their aperture and base length measured as well as their calcification (through the Total Alkalinity water quantification) before and after the experiment.

Four real replicates containing one individual of each of the three species will be monitored in terms of mortality, growth and calcification during the 4 week experiment in baths of 18, 24 and 30°C. All samples will be fed with artemia nauplii.



### LARVICULTURE:

Besides developing a protocol for *M. coccopoma* larviculture and monitoring larvae survival in different temperatures we also intent to test macroalgae extract for anti-fouling activity, using the cyprids as target organisms.



## EXPECTED RESULTS

As already indicated by our preliminary results, we expect higher survival, growth and calcification of *M. vesiculosus* towards warmer temperatures; *M. tintinnabulum* following a similar trend; and *M. coccopoma* presenting the opposite pattern.

## REFERENCES

- Newman, W.A; Zullo V. A. & T. H. Withers, 1969. Cirripedia. In: R. C. Moore, (ed.), Treatise on invertebrate palaeontology, R. Arthropoda, 4 (1): R206-R295 (Geol. Soc. America, Univ. Kansas).
- Carlton, J. T. & Geller, J. B., 1993. Ecological roulette: the global transport of nonindigenous marine organisms. Science. 261:78-82.