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# Relative importance of large and small scales processes setting spatial patterns of fecundity and larval quality in a tropical intertidal barnacle

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# Conference Program



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Jacksonville  
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Department of Biology

University of North Florida

Adam W. Herbert University Center, Jacksonville, Florida



## Relative importance of large and small scales processes setting spatial patterns of fecundity and larval quality in a tropical intertidal barnacle

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Nearshore trophic status may limit the performance of sessile intertidal filter-feeding invertebrates and set up patterns of variable reproductive potential at large scales (100's km), which can be blurred, however, by small scale processes, such as density-dependent mechanisms. We compared scales at which reproductive output vary among populations of the dominant barnacle *Chthamalus bisinuatus* in the north coast of São Paulo state, Brazil, during summer and winter conditions. We measured fecundity and larval quality at four different shores, spanning coastline of ca. 180 km, and at sites within shores, in a nested design. The results showed no differences of fecundity and larval quality (survivorship and lipid profile) among populations. In contrast, we identified small-scale variation of the survivorship of unfed nauplii within populations. Also, a negative correlation between fecundity and adult cover percentage in replicate rock chips further suggests the importance of small-scale processes, possibly competition for food resources in crowding conditions, leading to a decreased larval production.

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Topic Area Preference: Recruitment/Larval Ecology and Life History Strategies