

# The role of the sediment trapping in amphipod assemblages from intertidal tropical coralline algal turfs

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*Marilia Bueno*

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**Georgia Southern University, PO Box 8124, Statesboro, GA 30460**

Anthony T. Bretti

Anthony T. Bretti
Associate Vice-President
Division of Continuing Education

# The role of sediment trapping in amphipod assemblages from intertidal tropical coralline algal turfs

Bueno, Marília[12]; Flores, Augusto A. V.[2]; Leite, Fosca P. P.[1]

[1] Department of Animal Biology. Institute of Biology. Universidade Estadual de Campinas – UNICAMP, Campinas, SP, Brazil. [2] Centre for Marine Biology, University of São Paulo. São Sebastião, SP, Brazil.
buenom@unicamp.br

Sediment trapping can alter the physical structure and chemical environmental conditions in mat-like habitats. Added to seasonal cycles, those factors can exert a major influence on associated fauna. Coralline algae turfs are a dominant group in the lower intertidal level and host a diverse macrofaunal assemblage. Sheltered rocky shores were sampled through one year to inspect fluctuations in amphipod assemblages and sediment accumulation from coralline turfs. Fifteen amphipod species were found and community composition varied according to season (Pseudo-$F$ = 4.56; $d.f.$ = 3; $p$ = 0.001). During fall and winter, turfs were dominated by *Hyale nigra* (49.6%), *Cymadusa filosa* (19.7%) and *Elasmopus brasiliensis* (14.9%). During this period, smaller grain size, poorer sorting and lower organic contents were observed in the retained sediment. During spring and summer the opposite trend was found for all those variables. Species contributing the most to the formation of this group were *Apohyale media* (62.2%), *Elasmopus brasiliensis* (15.1%) and *Amphilochus neapolitanus* (7%). Hyalids *A. media* and *H. nigra* are omnivorous while *E. brasiliensis* is detritivorous and *A. neapolitanus* is a predator. Retained sediments may be an important food source for these species and probably play an important role on their distribution, since detritivorous may concentrate at patches with higher supply of organic matter.

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