



Pôster – Ecologia e Conservação

Spatial and temporal patterns of mobile invertebrate assemblages associated to canopy and turf-forming macroalgae

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Canopy-forming macroalgae can play important ecosystem functions, adding complexity to coastal and terrestrial trophic webs, promoting a highly complex environment that is often colonized by a rich fauna of mobile invertebrates. This associated fauna benefits from shelter against predation and from trophic resources that are available, directly or indirectly, in this environment. These benthic canopy-forming macroalgae generally predominate in advanced stages of succession, overlapping with algae turfs of less structural complexity. Nonetheless, environmental disturbances can prevent the establishment of canopy-forming, leading to a permanent phase-shift to turf domination. State transitions between turfs and canopies are well documented for temperate reef habitats however is unknown how much of an impact is generated owing to the loss of vagile invertebrates and it is important to understand the potential ecological effects that this loss of habitat can generate. On the coast of southeastern Brazil, the *Sargassum* spp. macroalgae predominate, which oscillate in a seasonal and predictable way, allowing the conduction of studies on the impact of these processes on the secondary production. Thus, this project aims to (1) investigate the differences of the mobile communities associated with canopy and turf-forming macroalgae, and to estimate the importance of vegetation habitats in the São Sebastião Channel, SP, Brazil and (2) examine the temporal dynamics of the mobile invertebrate communities associated with *Sargassum* beds. For this purpose, fieldwork took place throughout the *Sargassum* blooming season' (December/2017 - March/2018) for objective 1 and December – February/2019 for objective 2. Canopies formed by *Sargassum* spp. and *Galaxaura marginata* (brown and red algae) also turfs composed of filamentous and articulated calcareous algae were collected in different locations in the São Sebastião Channel - SP. The associated mobile fauna was separated into different size classes, counted and identified in large groups. Previous results show we obtained a significant amount of different taxonomic groups, a greater abundance and diversity of individuals in the macroalgae samples in relation to the turfs, we found in larger quantities gastropods and amphipods in the macroalgae, while in the turfs were found in greater amounts polychaetes and tanaidaceans. Most of the individuals were concentrated between the sizes of 1.7 - 2.8 mm and only the canopy-forming presented specimens larger than 12 mm. Red and brown macroalgae presented similar numbers of individuals and groups while filamentous turfs were more inhabited in relation to calcareous, being the habitat chosen for comparison during the second stage of this project which is under development.

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