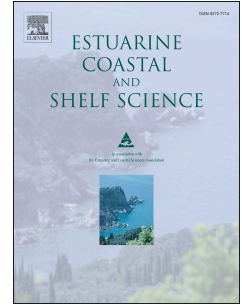


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## **Influence of detached macroalgae on fish size and condition in nearshore habitats**

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### **Abstract**

Nearshore habitats are important for reproduction, feeding and growth of many fish species and are usually subject to seasonal influxes of adults from other habitats. Those areas consist mostly of small-scale sites whose environments are affected by meso- or large-scale and continental events, making it difficult to establish seasonality of habitat use. Understanding which drivers make these habitats suitable for fish species and, in particular, why this might vary seasonally is relevant to resource management. Detached macrophytes are likely to improve refuge and food for fishes and invertebrates, increasing abundance (especially juveniles) and diversity. On the southeastern Brazilian coast, detached macroalgae are carried by surface currents and swell and deposited along beaches in the winter (Dry period), but are largely absent in the summer, nutrient-enriched Rain period. This project aimed to investigate the potential importance of macroalgae to fish populations in the southeastern Brazilian coastal region. Four areas were surveyed on the southern Espírito Santo coast. The main diet of *Larimus breviceps*, *Stellifer rastrifer* and *S. stellifer* (Sciaenidae) was determined and some key food items were then sampled from macrophytes. Samples of fishes, food items, algae and higher plants were subject to carbon and nitrogen stable isotope analysis in order to define food chains from algae and higher plants to fish. Fish sizes were compared among Dry and Rain periods. Fish condition was addressed through linear regression models fitted with Log-transformed eviscerated weight as the response variable, and Log-transformed Standard Length, Period, Site, Species and Reproductive Class

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