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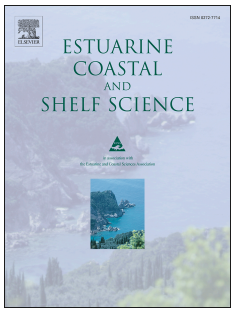

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Can microscale habitat-related differences influence the abundance of ectoparasites ? Multiple evidences from two juvenile coastal fish (Perciformes: Sparidae)

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Keywords: juvenile fish, ectoparasite, cleaning behaviour, dietary indices, Central Mediterranean Sea.

Abstract

The ectoparasite communities of two juvenile *Diplodus* species, *D. sargus* and *D. puntazzo*, were studied in a rocky coast of the Central Tyrrhenian sea (Mediterranean Sea) where three neighbouring nursery areas showed a differential availability of microhabitats due to a gradual protection gradient capable of influencing local hydrodynamic conditions. Five parasite forms were detected on juvenile hosts: *Peniculus fistula*, the two larval forms of gnathiids (praniza and zuphea stages), *Caligus* sp. and *Anilocra physodes*. Among these species an increasing rates of infestation (up to 57%), from the less protected to the most sheltered site, was detected. The largest infestation rate occurred in the most enclosed site, where *P. fistula* was the most infective species, also capable of affecting the body condition of juvenile fishes. In addition, to investigate behavioural processes among infected fish, both gut content analyses and *in situ* HD video sequences were used. Our results demonstrate that ectoparasites cannot be considered as accidental food items, implying an active removal of parasites among