

{rokbox title=|Cymodocea nodosa (Slender Seagrass) :: Image: F.T. Short (The IUCN Red List of Threatened Species)|
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[The three-dimensional structure of](#)

[*Cymodocea nodosa*](#)

[meadows shapes juvenile fish assemblages at Fornells Bay \(Minorca Island\).](#)

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Abstract: The role of the meadows of the Mediterranean seagrass *Cymodocea nodosa* as nursery habitats for fish remains largely unknown and there are only few studies investigating the influence of their structure on juvenile assemblages. Here, we monitored juvenile fish assemblages among shallow *Cymodocea nodosa* meadows (0–1 m) in Minorca Island (north-western Mediterranean Sea) in both July and September 2013. To assess the influence of structural components on juvenile fish assemblages, we selected two different meadow structure types: heterogeneous with intermingled boulders and homogeneous meadows, i.e. without boulders. Juvenile fish assemblages varied significantly among these two meadow structures. Heterogeneous meadows had higher total juvenile density and species richness, where some species were only found in these portions, such as *Coris julis* and *Serranus spp*. Other species, such as *Symphodus spp* and *Sarpa salpa*, were also more abundant within heterogeneous meadows. However, densities of some species were not increased in heterogeneous meadows demonstrating a specific response to habitat structure. For instance, *Diplodus annularis* displayed similar abundances in both heterogeneous and homogeneous portions of the meadow. Our study reveals that the intrinsic structural variability of seagrass meadows plays a key role for the assemblage of several fish species that are characterized by different early life

history strategies.

Keywords: Fish nursery, Habitat structure, Seagrass meadows, *Cymodocea nodosa*, Balearic Islands, Mediterranean Sea