{rokbox title=|Location of Minorca Island and the sites sampled in 2012 and 2013 :: Image: Authors|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-estacion-investigacion-jaume-ferrer-ieo-juvenile-fish-in-cystoseira-forests-cuadros-et-al-2019-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-estacion-investigacion-jaume-ferrer-ieo-juvenile-fish-in-cystoseira-forests-cuadros-et-al-2019.jpg{/rokbox}

Amalia Cuadros, **Joan Moranta**, Luis Cardona, Pierre Thiriet, Patrice Francour, **Eva Vidal**, **Jaime Sintes**
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Juvenile fish in *Cystoseira* forests: influence of habitat complexity and depth on fish behaviour and assemblage composition.
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Abstract: The sublittoral forests formed by the fucoid algae *Cystoseira spp.* are important juvenile habitats for many Mediterranean fish species. However, the spatial variability of juvenile fish assemblages within the forests and the potential environmental drivers, such as depth and habitat complexity, remain poorly understood. We estimated densities, sizes and behaviours of juvenile fish assemblages in subtidal (0-15 meters)
Cystoseira brachycarpa var. balearica
forests in north Minorca Island (North-western Mediterranean Sea) over two consecutive autumns (2012 and 2013). Depth and forest complexity, here measured as canopy volume, had both a significant and independent effect on the juvenile fish assemblages in terms of species abundance composition and body size. Assemblages found in the shallowest depth range (3-4m) were characterized by greater densities of the ornate wrasse
Thalassoma pavo
, while those deeper (10-12m) had higher densities of the rainbow wrasse
Coris julis
, independently of its size composition. Juveniles of both species were more abundant in less complex forests; conversely juveniles of wrasses of the genus
Symphodus
were more abundant in more complex forests. The smallest sizes of
T. pavo
occurred in the most complex forests. On the other hand, our results demonstrated that juvenile fish behaviours were unrelated to the complexity of the
Cystoseira
forests but mainly related to the body length. The effects of body length on behaviour were however species dependent. Cryptic and transitory behaviours were mostly observed in the

smallest and largest juveniles of
T. pavo
and
C. julis
, respectively, while the behaviour of Symphodus spp. was unrelated to their body length. Our study emphasises the importance of preserving healthy
Cystoseira
forests and their intrinsic patchy nature, as this habitat, with its mosaic of different complexity degrees and bathymetrical variability, enable the presence of different fish species at various life stages.

Keywords: Juvenile fish, behaviour, depth, habitat complexity, *Cystoseira* forests, Mediterranean Sea