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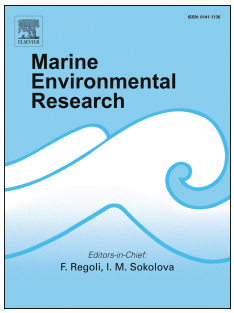

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Ocean acidification does not impair predator recognition but increases juvenile growth in a temperate wrasse off CO_2 seeps

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Abstract

Fish behavioural effects under Ocean Acidification (OA) rely on changes expected to occur in brain function, which can be reversed by gabazine, a GABA-A antagonist. Here, using standard two-channel choice flume, we assessed OA effects on the predator recognition ability of both gabazine-treated and -untreated *Symphodus ocellatus* post-settlers living off CO_2 seeps in the Mediterranean Sea. To estimate the post-settlers background predation risk we evaluated the density of their predator in the wild and through otolith aging techniques we assessed their post-settlement growth. Results showed that: 1) post-settlers predator recognition was unaffected under OA; 2) post-settlers living in elevated CO_2 were on average 15% bigger in size than those from ambient conditions. Our results support fish behavioural tolerance to OA, potentially mediated by pre-exposure to high-risk predation levels, and speculate that by increasing body size, juvenile fish might more efficiently avoid their predators.

Keywords: Global change, Effects-fish, Risk assessment, Settlement, Carbon dioxide, CO_2 vents, pH, *Symphodus ocellatus*