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Oysters and Eelgrass: Potential Partners in a High PCO₂ Ocean

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OYSTERS AND EELGRASS: POTENTIAL PARTNERS IN A HIGH PCO₂ OCEAN

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Ocean acidification (OA) threatens calcifying organisms such as the Pacific oyster, *Crassostrea gigas*. In contrast, eelgrass, *Zostera marina*, can benefit from the increase in available carbon for photosynthesis found at a lower seawater pH. Seagrasses can remove dissolved inorganic carbon from OA environments, creating local daytime pH refugia. Pacific oysters may improve the health of eelgrass by filtering out pathogens such as *Labyrinthula zosterae*, which causes eelgrass wasting disease (EWD). Using a laboratory experiment, we found that co-culture of eelgrass with oysters reduced the severity of EWD. EWD was also reduced in more acidic waters, which negatively affect oyster growth.



Photo 1. Pacific oysters and eelgrass co-occur in the intertidal zone in Willapa Bay, WA, USA. Photo credit: Morgan Eisenlord.



Photo 2. Oyster aquaculture frequently co-occurs with native eelgrass. This photo shows bag-on-line aquaculture. Photo credit: Colleen Burge.

These photographs illustrate the article “Oysters and eelgrass: potential partners in a high pCO₂ ocean” by Maya L. Groner et al. published in *Ecology*. <https://doi.org/10.1002/ecy.2393>