

Impact of ocean acidification on echinoderm larvae: from physiology to selection

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The impact of OA appears to be extremely species- and even population-specific and depends on life-history stages and the processes studied. This impact also needs to be considered in the context of additional relevant factors such as temperature and other anthropogenic stressors such as pollution. The current paradigms (e.g. OA will negatively impact calcifiers) are now being revisited making any large scale prediction impossible or over-simplistic. To allow large scale predictions of the impact of climate change on marine ecosystems it is important to understand how OA together with other stressors will modify the evolutionary rules shaping marine ecosystems. We have been analysing interactions between present and future natural environmental variability, life history strategy and population plasticity along latitudinal gradients to explore both intra- and inter- specific adaptive potential and genetic variability in various animal species. This presentation will summarize our data on the impact of OA and other stressors on physiology and energetic balance with emphasis on life-history strategies (e.g. planktotrophy vs lecithotrophy, egg size, etc.) to identify the new evolutionary rules in this changing ocean.