Ocean acidification alters morphology of all otolith types, delays settlement in Clark's anemonefish (*Amphiprion clarkii*)

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Ocean acidification, the ongoing decline of surface ocean pH and [CO_3^{2-}] due to absorption of surplus atmospheric CO_2, has far-reaching consequences for marine biota, especially calcifiers. There is evidence in the literature that ocean acidification increases otolith size and alters shape, perhaps impacting otic mechanics and thus sensory perception. Here, we reared larval Clark's anemonefish, Amphiprion clarkii (Bennett, 1830), in various seawater pH treatments analogous to future ocean scenarios in a 3x-replicated experimental design. Upon settlement, we removed all six otoliths from each individual fish and analyzed them for treatment effects on morphometrics including area, perimeter, and circularity, as well as four mineralogy metrics evaluated by visual examination of scanning electron micrographs: lateral development, percent visible crystals, crystal habit, and crystal polymorph. Our results reveal myriad ocean acidification impacts on all otolith types as well as fish settlement and somatic growth.