

Worden, S., Bell, C., DaCosta, C., George, M., Lohse, D., Lonhart, S., Miner, M., Raimondi, P. 2006. Serious Decline in Central California Black Abalone Populations: Outlook for Recovery and Community Structure Implications

Populations of black abalone (*Haliotis cracherodii*) have been steadily declining in the southern portion of the species' range due to a fatal disease called "withering syndrome". Withering syndrome (WS) is caused by the bacterium *Candidatus Xenohaliotis californiensis*, which attacks the lining of the digestive track and results in reduced body mass, weakness, and eventual withering of the abalone's foot until it can no longer cling to the substratum. Declines have been so severe across all regions in southern California that the species is now a candidate for protection under the USA Endangered Species Act. Researchers at UC Santa Cruz, working with the MARINe (Multi-Agency Rocky Intertidal Network) and PISCO (Partnership for Interdisciplinary Study of Coastal Oceans) monitoring groups have documented the northward progression of WS along the California coast. Recently, concern about the northward movement of WS into some of the final remaining large populations of black abalone prompted the Monterey Bay National Marine Sanctuary to provide funding to monitor additional sites within the sanctuary's boundaries. Sites now range from Pt. Conception to Pigeon Point. At each site, black abalone are counted and measured within permanently marked plots. By counting and measuring abalone, we can document both population declines (indicated by decreases across all abalone size classes), and recruitment events (indicated by increases in the number of abalone < 50mm in length). Implications of the declines are presented, including the effect of losing these large grazers on intertidal community structure, and the outlook for black abalone recovery.