



Effects of ocean acidification on Fujian oyster (*Crassostrea angulata*) biomineralization

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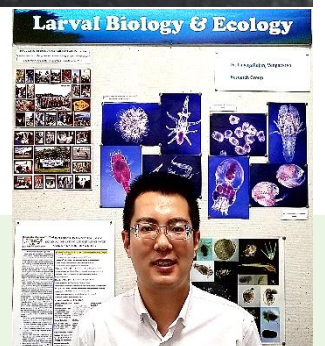
Time: 11 AM

Venue: Zoom



About the speaker:

Li Yang is a PhD student in Hong Kong Oyster Hatchery and Innovation Research Unit and the Swire Institute of Marine Science. His research focuses on the impact of ocean acidification on oyster biomineralization.



Abstract:

Ocean acidification (OA) reduces seawater pH rapidly which has been threatening marine ecosystem structure and function for decades. OA disrupts the biomineralization process in marine organisms including edible oysters, which means potentially ecological risks to the marine ecosystem and economic losses to aquaculture. However, we are yet to fully understand how OA impact biomineralization in Fujian oyster, which is most cultivated in China. In my research, first I found that transgenerational effect aggravated negative effects on biomineralization physiology, and long-term OA caused extra energy demand. Next, the transgenerational effect aggravated the inhibition of ALP, Mg^{2+} -ATP, and Ca^{2+} -ATP activities after long-term OA. Besides, transcriptome analysis showed that ion transportation related genes and the biomineralization genes were affected, which provided basics for further research. In further work, the effect OA on gene regulation in the oyster shell will be investigated, and the related novel shell matrix proteins will be identified. These results will tell us the wholistic effect OA in Fujian oysters from physiological traits to shell matrix proteins.