

MASTS Small Grant: Laura Wicks

Report on the Oceans in a High CO₂ World Symposium

With the funding from MASTS, I attended the 3rd Symposium on Oceans in a High CO₂ World, in Monterey, California. The conference hosted more than 500 of the world's leading scientists discussing the impacts of this global threat on marine organisms, ecosystems, and biogeochemical cycles.

At the Symposium, I presented two posters outlining the research that we conduct at Heriot-Watt University. The first was titled 'Benthic Invertebrates in a High CO₂ World; What does the future hold?' which described the findings of a recent review I published in '*Oceanography and Marine Biology: An Annual Review*'. The poster outlines the vast variability in responses of different organisms that live on or in the seabed, and suggested some key research areas for the future.

The second poster I presented was on experiments we have been conducting on cold-water corals, titled 'Acclimation of the cold-water coral *Lophelia pertusa* to predicted rises in atmospheric CO₂ and sea temperature'. These experiments looked at how the corals may respond to predicted future changes in the oceans, by measuring the growth, calcification and respiration of the corals under current and future conditions. Both posters were well received, and I had interesting discussions with potential collaborators and colleagues.

Our next research grant focuses on the cold-water coral *Desmophyllum dianthus*, and using boron isotopes to calibrate its use as a proxy for past ocean pH. As such, attending the conference gave me the opportunity to discuss this planned research with colleagues who have undertaken similar work.

I also discussed outreach opportunities with colleagues from the US, as well as with members of the media who were invited along to the Symposium. During the meeting, I used Twitter to inform the online community of the up to date findings of the conference, through our Twitter feed at the Centre for Marine Biodiversity and Biotechnology (HWU), and www.Lophelia.org.

I attach PDF copies of the posters I presented, and thank MASTS for their generous support.