

## O22- Capture rates of the Cold Water Coral *Lophelia pertusa* on living phyto and zooplankton under different current speed regimes

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To determine prey capture rates by the cold water coral (CWC) *Lophelia pertusa*, under conditions designed to simulate the natural environment, feeding experiments have been conducted with colonies of *L. pertusa* from the Mingulay reef complex (Sea of Hebrides, UK). Potential prey items used were a culture of the marine diatom *Skeletonema marinoi* and freshly captured zooplankton. This is the first time feeding trials with *L. pertusa* have been carried out using living algae and naturally-occurring zooplankton as opposed to aquarium-grown prey (e.g. *Artemia salina*) or frozen food material. The experimental apparatus consisted of four circular tanks (three experimental tanks and a control); in each tank current speed was regulated, and in order to test the live prey capture efficiencies, three different current speeds (2 cm.s<sup>-1</sup>, 5 cm.s<sup>-1</sup> and 10 cm.s<sup>-1</sup>) were used for each experiment. Our results show clear differences between the three current speeds. *Lophelia* successfully captured algae under 5 cm s<sup>-1</sup> and zooplankton between 2 and 5 cm s<sup>-1</sup> whereas at the higher current speeds both algae and zooplankton capture could not be significantly detected. These results will be discussed in context to the natural environmental conditions of this CWC species.