

MFA Mussel Restoration Project - October 2020 Update

October mussel sampling

Survival of the mussels that were placed at five sites on the seabed in the Pelorus Sound in late January remains high after nine months. Mussel survival ranges from 99% - 88% at all five sites with the lowest survival at Grant Bay, which had a large spike in the 11-armed starfish at 5-months after deployment (Figure 1). The starfish continue to reinvade the mussel beds, despite continual removal at each sampling, but the starfish numbers have declined at four of the five sites (Figure 1).

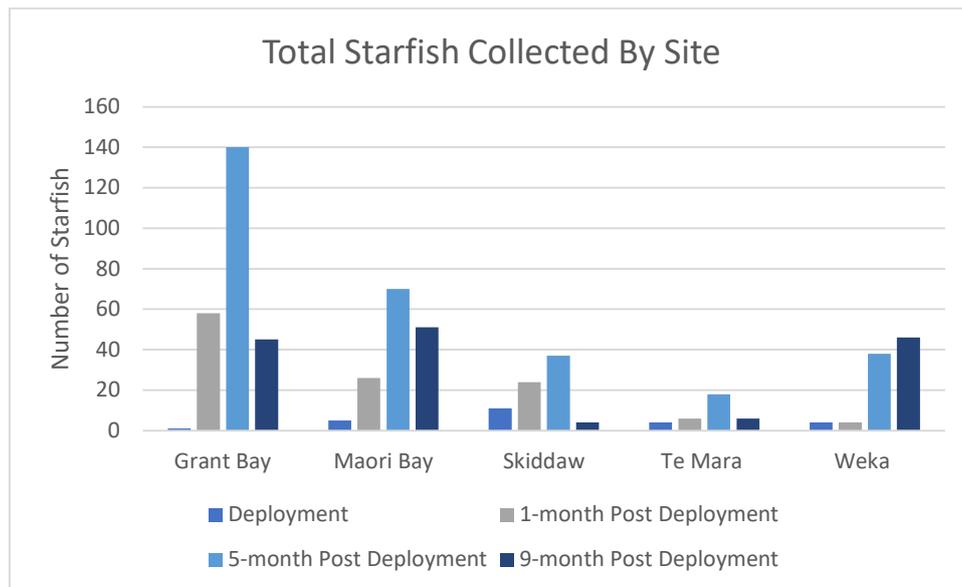


Figure 1: The total number of starfish at each site at deployment, 1-month, 5-months, and 9-months after deployment.

Assessing biodiversity on the mussel beds

We are currently in the process of assessing the biodiversity on the mussel beds versus adjacent control areas. We are looking at the fish visiting the mussels, the animals and seaweed living inside of the beds, along with the animal community now living in the sediment underneath the mussels. Early results show that there are more animals living inside and visiting the mussel beds compared to adjacent mud areas (Figure 2). The most common species we have found included blue cod, spotties, triple fins, 11-armed starfish, cushion starfish, and sea snails. We also found crabs, brittle stars, and sea slugs (nudibranchs). The initial results appear to show that the presence of the mussels on the seafloor greatly increase the number and diversity of animals living there compared to bare seafloor.

If you have any questions or comments on this project, please feel free to reach out to Emilee Benjamin via email at egol669@aucklanduni.ac.nz.



Figure 2: Top Left- Diver performing the October sampling on the mussels, while a blue Cod and spotty swim over the mussel bed at Grant Bay. Top Right- A triple fin, sea snail, and an 11-armed starfish on the mussel bed at Grant Bay. Bottom Left: A brittle star resting on some algae that is covering the mussel bed at the Skiddaw site. Bottom Right: A sea slug (nudibranch) crawling along the mussel bed at Weka Point.