

Mussel Restoration Project for the Marlborough Sounds – August 2021

Subadult/Adult mussel experiment

In early July we placed 20 tonnes of subadult mussels, supplied by Sanford, and 10 tonnes of adult mussels, supplied by Jonathan Large, at two depths in Kenepuru Sound. The aim of this experiment is to test the benefits of restoring adult mussels (90-100 mm in length) versus subadult mussels (50-60 mm), as subadult mussels are thought to be more adaptable, have stronger attachment threads, and provide more mussels per tonne than adults.



Figure 1: Left: The crew and Emilee on the Lady Marie after the deck was cleared of the 30 tonnes of mussels! Right: A bag of mussels preparing to be deployed onto the mussel plots.

18-month post-deployment monitoring on the first mussel deployment

In early August we performed an 18-month monitoring on our first mussel deployment. Four of the locations (Maori Bay, Skiddaw, Te Mara, and Weka Point) had high survival (81-99%), but our mid-Pelorus site, Grant Bay, lost the fight with starfish. Very few mussels remained at Grant Bay (~50 mussels in total) and the few that were left had high numbers of starfish on top eating the remaining mussels. Grant Bay had experienced the highest numbers of large starfish arriving at the site over the last 18 months (80 per sampling event, mean=31 mm), while the Kenepuru sites have had less starfish that are smaller in size (8-26 per sampling event, mean=16 mm).

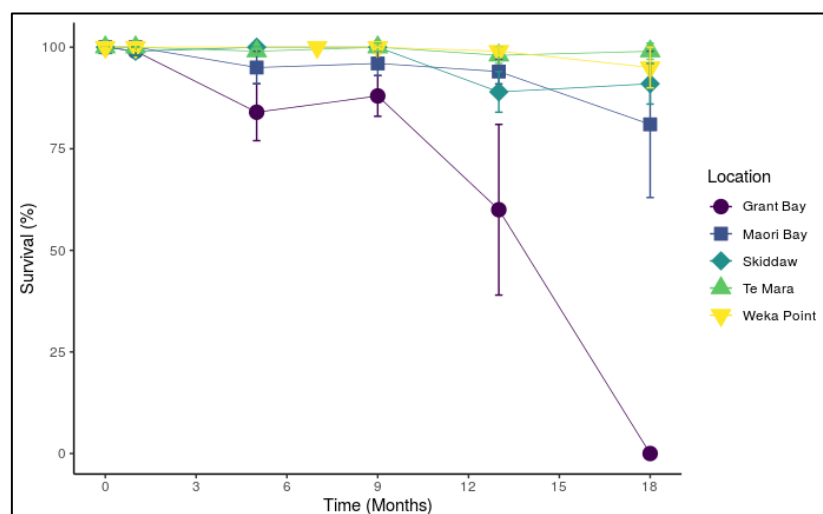


Figure 2: Mussel survival over time at the five sites.



Figure 3: 11-arm starfish sitting on the empty mussel shells at Grant Bay at the 18-month monitoring.

As always, 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