

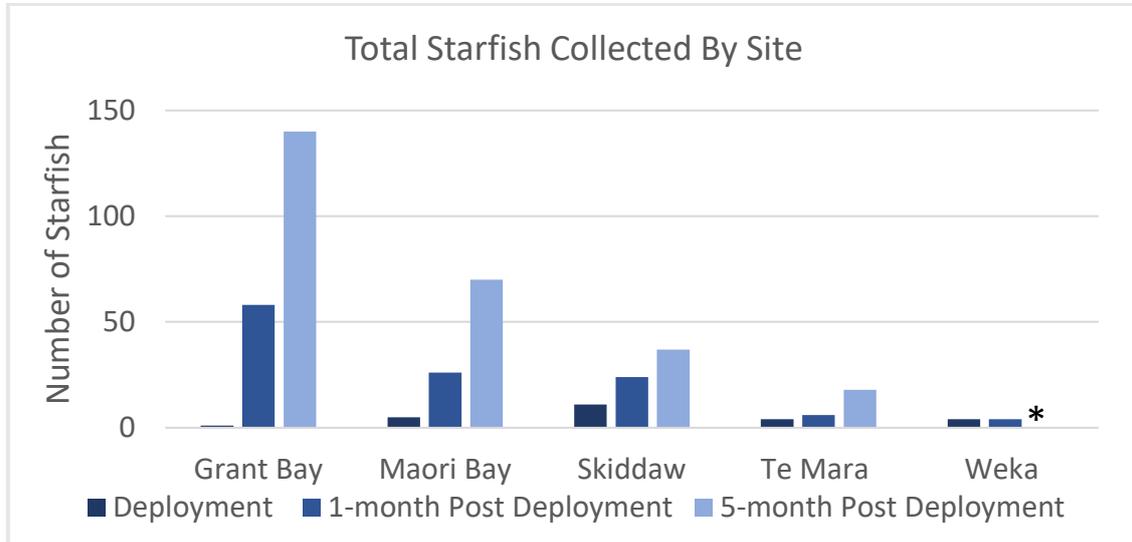
## **Marine Farming Association - July Monthly Update - for the Industry Advisory Group**

### **July mussel sampling**

Survival of mussels was high across all sites at our 5-month check earlier this month! The highest mortality was at Grant Bay, which had a mean loss of 16% of mussels since they were placed on the seabed in late January (Table 1). This higher mortality at Grant Bay is likely the result of starfish predation. At Grant Bay we collected 140 starfish across the whole site, which was at least double what was collected at the other three sites that were sampled (Figure 1). Unfortunately, mussels at Weka Point could not be sampled because of time constraints on the sampling.

*Table 1: The mean percent mortality that each site at 1-month and 5-months after deployment. \*Weka Point was not sampled at 5-months due to logistical constraints.*

<b>Percent Mortality at Each Sampling Interval</b>					
	<b>Grant Bay</b>	<b>Maori Bay</b>	<b>Skiddaw</b>	<b>Te Mara</b>	<b>Weka</b>
<b>1-month Post Deployment</b>	<b>1.2</b>	<b>0.0</b>	<b>0.7</b>	<b>0.5</b>	<b>0.4</b>
<b>5-month Post Deployment</b>	<b>15.6</b>	<b>4.5</b>	<b>0.0</b>	<b>0.8</b>	<b>*</b>



*Figure 1: The total number of starfish collected across each site at deployment, 1-month and 5-months after deployment. \*Weka Point was not sampled at 5-months due to logistical constraints.*

### **Recycled Shell Experiment**

The resource consent has been granted from the Marlborough District Council for our second mussel deployment which includes a prior deposit of recycled mussel shell. Working with Sanford's on sourcing the recycled shell we are aiming to put the shell in the water next month and deploy the mussels on top of the shell around late Sept/early October. We are

excited about this experiment because other studies have shown that adding recycled shell leads to higher survival, biodiversity, and recruitment.

Don't forget to reach out to Trevyn at [ttoo112@aucklanduni.ac.nz](mailto:ttoo112@aucklanduni.ac.nz) if you or anyone you know would like to participate in his interviews with long term residents of the Sounds. As always if you have any comments or feedback on this month's progress, please feel free to reach out via email at [egol669@aucklanduni.ac.nz](mailto:egol669@aucklanduni.ac.nz).

Thank you for all your help and your time with this project. 😊 Emilee Benjamin

## Photos from July 2020

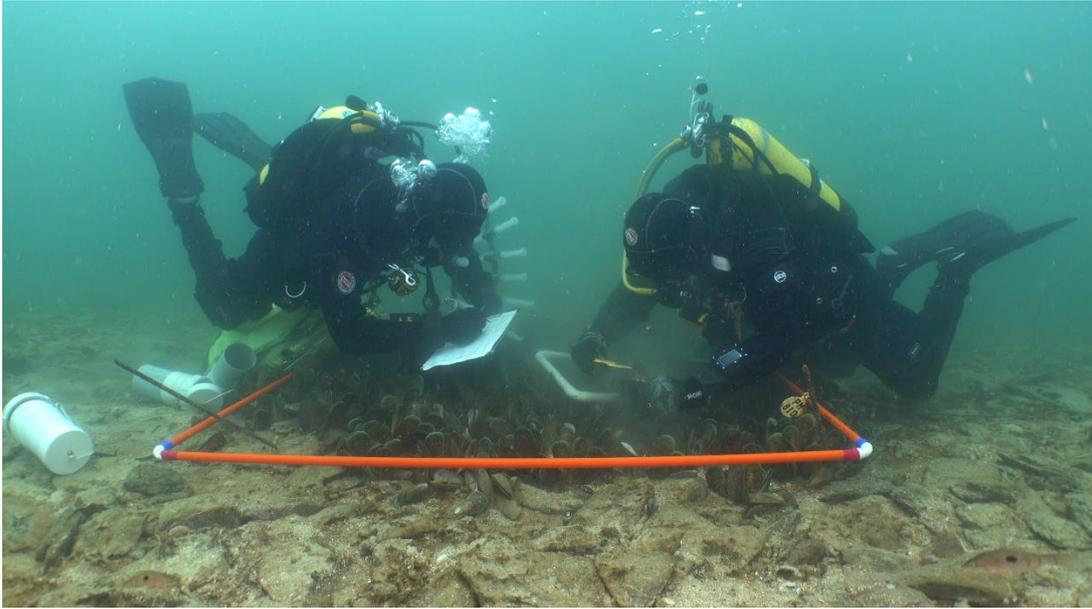


Figure 2: NIWA divers measuring mussels to look at growth at the Grant Bay site. This photo is taken after they had removed and bagged the starfish that were on the mussel plot.



Figure 3: A restored plot at the Grant Bay Site before the starfish were removed.



Figure 4: Diver taking sediment samples in a control plot to measure differences in the sediment that are occurring under the mussel beds versus the surrounding area.