

Project Update: October 2022

All analyses of the generated data were successfully completed, and my dissertation has been written up and submitted for examination. The main points from my results were that South Africa's inshore Bryde's whale population forms a single population with low genetic differentiation between the west and east coasts of the country. The population also shows high neutral nuclear diversity but low mitochondrial DNA diversity. The ecological reasons for this pattern can arise from various factors such as larger than expected effective population size and sex-biased dispersal ranges. However, a larger sample size and broader sampling is required to confirm these potential factors. On a global scale, the preliminary connectivity between regions shows South Africa's population shares a haplotype with an individual from the eastern Indian Ocean, however this is likely an ancient connection. Furthermore, sequences from South Africa's offshore individuals show connections to different oceanic regions in comparison to South Africa's inshore population. These results highlight the need for future research to look into census and effective population size estimates as well as adaptive genetic variation of the South African inshore population as this will provide a reliable indication of the viability of the population, thus informing on effective conservation practices.

In August 2022, I presented an e-poster for the Society of Marine Mammalogy Biennial Conference on preliminary data analyses I had completed at that point. The poster is attached for your viewing. This was important as it gave me the opportunity to share my research on a global platform and inform other international researchers on South Africa's inshore Bryde's whale population.