Project Update: October 2023

Eyes on the Reef

With the help of Fuvahmulah Dive School, remote time-lapse cameras were deployed at three sites around the island to monitor the visitation of endangered elasmobranchs including oceanic manta rays, scalloped hammerheads, and pelagic thresher sharks. Overall, we captured an average of 50 days of timelapse footage from each site. While Fuvahmulah Dive School deployed and replaced cameras, a small group of senior marine science students and I were hard at work recharging camera systems and processing the collected footage. We met twice a week at our favourite local café, Kambili, and watched the time-lapse videos recording the different species of sharks and rays which happened to make an appearance. The students quickly became experts in shark ID and were able to share their knowledge and experience with younger students during a presentation we designed for students at Gnaviyani Atoll Education Centre.

In addition to running community outreach and collecting timelapse camera data, my time in Fuvahmulah allowed me to connect with local stakeholders to learn about priority areas of research. Alongside Pelagic Divers Fuvahmulah, I identified a need for survey designed to assess visiting tourists' willingness to contribute financially to conservation initiatives on the island. With the recent designation of the atoll as a UNESCO Biosphere, entrance fees are included in developing management plans, however, research is required to ensure the tourism industry remains sustainable. After meeting with local stakeholders including Fuvahmulah City Council, dive centres, and Fuvahmulah Nature Park, I identified conservation initiatives for which long-term funding plans have not been addressed and designed an online contingent valuation study which was launched in partnership with the local dive centre, Pelagic Divers Fuvahmulah. With the support of The Rufford Foundation and the Michael Smith Foreign Study Supplement, I was able to complete the data collection required to quantify the Atoll's marine megafauna diversity, as well as conduct the stakeholder consultations and connect with the community to ensure a survey is designed to contribute critical knowledge to policy design.

With the help of the Manta Trust staff, Fuvahmulah senior marine science students, Sarah Manson (University of Victoria Directed Studies student), and Isabel Gregor (Uvic USRA Research Assistant), we have processed over 80% of the time-lapse data collected. Throughout the study, three species of ray and seven species of sharks were identified in

50,683 images. The pelagic thresher was the most common species across the images collected.

Survey data collection is currently in progress through the online platform created in partnership with Omnisis, a UK based marketing research company and a total of 67 tourists have responded to date. Since returning to the University of Victoria, I have remained in contact with the Maldives Environment Protection Agency, the Ministry of Environment as well as Fuvahmulah Dive School and Pelagic Divers Fuvahmulah to keep all parties up to date on project progress as I complete data analysis and prepare the projects for publication.