Project Update: September 2015

In 2015, our research team continued the use of passive acoustic technology to examine the residency and site fidelity patterns of *Manta birostris* at critical sites off mainland Ecuador.

So far, results of the acoustic tagging programme have been extremely enlightening. Individual giant manta rays were shown to travel between habitats at Isla de la Plata (within the jurisdiction of Machalilla National Park and therefore, a protected area) and Bajo Copé (a heavily fished seamount situated 60 km away). The Bajo Copé seamount appears to be an important seasonal aggregation site for *Manta birostris*, perhaps even more important than Isla de la Plata. Significant feeding activity has been seen at Copé and monitoring stations have suggested that tagged individuals spend more time around this aggregation area than at Isla de la Plata.

In addition, we were able to establish fine scale information about individuals traveling between Isla de la Plata and Bajo Copé. This included the minimum time for the distance traveled, how long individuals used each habitat and under what conditions (time of day, temperature, salinity etc.).

The field season kicked off early August and acoustic listening stations that had been underwater since September 2014 field were retrieved and serviced. Within our first two weeks In Ecuador, 14 giant manta rays were tagged with acoustic transmitters (seven males and seven females).

A member of our research team tagging a melanistic male giant manta (measuring ~ 5.5 m across) with an acoustic transmitter.

The quick deployment of so many tags has ensured an extensive and interesting set of data for the beginning of the field season. Females were found to be resident at the Isla de la Plata for much longer periods of time in comparison to males.

In addition, with the arrival of a strong El Nino event forecast, we have recorded less individual manta rays in comparison to previous field seasons. However, some of the manta rays we have tagged this year have been resident at Isla de la Plata for weeks at a time. Acoustic telemetry data from this year has greatly contrasted with what we have found in previous years where tagged manta rays were only present for a matter of days.