

MS Thesis Defense

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Title: Population Size And Viability Of Bottlenose Dolphins (*Tursiops Truncatus*) Off The Coast Of The Parque Nacional De Este, Dominican Republic

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ABSTRACT

The population of bottlenose dolphins (*Tursiops truncatus*) living off the Southeast coast of the Dominican Republic was analyzed to determine demographic parameters and to better understand the status of the population. Sighting data from the Fundacion Dominicana de Estudios Marinos was used for photo-identification analysis. The sighting histories produced were entered into Pollock's robust model for mark-recapture analysis. From this analysis the abundance of the population was estimated as 102 (95% CI 66-178) dolphins in 2010 with an average annual survival of 0.952 from 2007-2010. Population viability analysis was performed using these data and reproductive parameters from the literature on bottlenose dolphins. Due to uncertainties in the models two scenarios were produced. One scenario represents the best estimates possible and shows the population to be growing. A second scenario, using only slightly different parameters, shows the population to be in decline. In either scenario the removal of dolphins from the population has long term effects, the magnitude of which are dependent on the sex and age category of the animals removed. Removing female dolphins has longer term impact than removing male dolphins.