

## Adult survival and reproduction in an Argentine bottlenose dolphin population: The science needed for its conservation

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Several small populations of bottlenose dolphins (*Tursiops truncatus*) are known to inhabit the Atlantic coast of Argentina, however, apparently with little exchange between them. The study population in Bahia San Antonio (San Matías Gulf, province of Río Negro) appears to be one of the southernmost populations (42°S/65°W). Adult survival and calving rates are critical for the survival of this population.

Boat-based photo-identification surveys between 2008 and 2011 were used for a mark-recapture analysis of the survival of 35 distinctly marked adults. Survey trips in September 2008 (n=9), August 2009 (n=10), September 2010 (n=6) and in September 2011 (n=6) were used as secondary periods for a Pollock's Robust Design analysis within MARK. The population was assumed to be closed within the secondary periods, and model selection indicated random migrations (rather than Markovian or No migration) outside the secondary periods. Adult survival was very high.

Calving interval was calculated for 14 reproductive females with 28 calves since 2006 with the average being  $3.5 \pm 1.03$  years. Assuming a population size of approximately 100 individuals, the minimum annual birth rate is 4.7% per year. Of the 28 calves, 3 are presumed to have died within the first 2-3 years of life, whereas 14 are known to have survived that period.

Although bottlenose dolphins occur further south along the Argentine coast, the study population appears to be the most southerly stable population after the neighboring Valdez population was recently reported to be vanishing. Interactions with fishing and contamination appear to be the most likely impacts on adult survival and reproduction. So far, our results indicate a relatively small population with apparently healthy birth and survival rates.