Project Update: April 2022

Understanding the physiological consequences of boat traffic, particularly dolphin-watching activities, will significantly contribute to current management and conservation efforts, particularly for the isolated bottlenose dolphin population present in the Bocas del Toro Archipelago. For this reason, cortisol, corticosterone, progesterone, and testosterone were quantified in blubber samples with the objective of assessing metabolic and reproductive steroid hormones differences between two populations of bottlenose dolphins living in areas with different levels of boat traffic (Bocas del Toro vs Cayo Zapatilla and Chiriqui Lagoon). Dolphins inhabiting the site with high boat traffic had significantly higher concentrations of cortisol and corticosterone than the site with low boat traffic. However, data not shown that the cortisol hormone negatively influences the concentrations of the reproductive hormones in this population. Therefore, our findings provide new evidence of vulnerability of bottlenose dolphins in Bocas del Toro, since they are also showing stress in relation to the high tourist boat traffic.

A dolphin socializing in Dolphin Bay (Bocas del Toro). © Mónica Gamboa.

A dolphin-watching boat close to a dolphins' group socializing in Dolphin Bay. © Dalia C. Barragán-Barrera.


A dolphin jumping in Dolphin Bay (Bocas del Toro). © Dalia C. Barragán-Barrera.