

## Insights into the Trophic Ecology of Killer Whales (*Orcinus orca*) in the Mexican Central Pacific.

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Knowledge about trophic ecology of killer whales (*Orcinus orca*) distributed in the Mexican Central Pacific is scarce, although different authors have made reports of feeding events on many different prey species, they have not made any insights on their trophic ecology, which was the aim of this project through the usage of stable isotopes ratios of carbon ( $\delta^{13}\text{C}$ ) and nitrogen ( $\delta^{15}\text{N}$ ), a biochemical technique that has been performed widely, providing information about trophic position and habitat use. Marine mammals' surveys were conducted to look for killer whales. Each one of the individuals sighted was sampled with a remotely biopsy system, using a Barnett 150lbs crossbow with modified arrow tips, to take a small skin and fat sample. A total of 10 killer whale samples were collected. Additionally we obtained samples of potential killer whale prey such as spotted dolphins skin (*Stenella attenuata*, n=50), humpback whales skin (*Megaptera novaeangliae*, adults n=14 and calves n=17), olive sea turtle scale (*Lepidochelys olivacea*, n=48), and muscle samples of 13 fish species (n=40). Likewise some of these samples were used to determine isotopic values of the study area. We used the grant for SMM to pay isotopic analyses of 150 out of 179 samples; each sample had a cost of 10 USD. Relationships between stable isotopes of carbon ( $\delta^{13}\text{C}$ ) and nitrogen ( $\delta^{15}\text{N}$ ) of killer whales and their potential prey species is under analysis. This research is part of a bachelor's thesis of a student that I'm currently supervising (CDOO) in our institution, and we expect that it will be concluded in July. We also expect that we can show results in next 21st biennial conference and finally we will submit the manuscript to be published in a Scientific Journal during 2015.