Impact of boats on the vocal behavior of humpback whales off Brazil

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Experiments were performed to evaluate the impact of boat approaches on the vocal behavior of humpback whales that breed around the Abrolhos archipelago off the Brazilian coast. Vocalizing whales were located by monitoring the amplitude of each individual's sounds. Silent approaches to focal singers were performed using a small zodiac with an improvised sail. Songs were recorded with one hydrophone connected to a portable DAT recorder before and during the approach of a vessel. Spectrograms were correlated to each whale's activity and position with respect to the vessel. Differences in song variables of two individuals were tested when the motor was ON and OFF. Both whales sang shorter versions of their songs when exposed to engine noise. No alteration in mean phrase duration was detected, but the number of phrases in each theme decreased. Three individuals interrupted their songs after a motor boat switched gears within 300 m, and resumed singing when the engine was returned to neutral. The limited number of observables calls for further investigation to evaluate the consequences of boat impact. More reliable information will allow regulation to achieve sustainable tourism activity in the area. [Work supported by FBPN, MacArthur Foundation, Society for Marine Mammalogy, Instituto Baleia Jubarte.]