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Final Report

Humpback whale (*Megaptera novaeangliae*) song across successive breeding seasons and their use as a conservation tool

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One of the many behaviors of humpback whales documented on the breeding grounds is song. This study aimed to describe the structure of song in the Colombian Pacific, to make comparisons to song on other breeding grounds, and to strengthen conservation initiatives. Funds from the Society for Marine Mammalogy were used to purchase a hydrophone from Cetacean Research Technology and for fuel expenses. Approximately 4 hours and 45 minutes of song were analyzed. The data collected during the 2014 breeding season was then compared with 2013 recordings. As expected, the same themes coded in 2013 were also heard during 2014. The structure of Theme 1 (AB AB AA) was very similar to 2013, but the 'A' unit in the AB phrase was sometimes split into 3 individual units, with the same duration of between 1 and 3 seconds. Similarly, the pattern of the phrase repetition in Theme 2 (F B1) was very similar between 2013 and 2014. Theme 3 (SS SS), however, consisted of more down sweep units in 2014. Additionally, preliminary comparisons showed similarities to individual units and phrase patterns in the literature from song in Gabon, Brazil, Tonga, and Hawaii. Song recordings were used by the Foundation throughout the breeding season to educate local communities about conservation and to advocate for safer tourism and fishing practices. Presently, acoustic parameters are being coded from the 2014 data for comparison to 2013 data. Long-term results of this study will contribute to the understanding of the function of humpback whales song.