

Perazio, C. E., Zapetis, M. E., Roberson, D., Botero, N. and Kuczaj II, S. 2017. Humpback whale, *Megaptera novaeangliae*, song during the breeding season in the Gulf of Tribugá, Colombian Pacific. *Madagascar Conservation & Development* 13,1: 83–90. <http://dx.doi.org.104314/mcd.whales.1>  
Supplementary Material

## SUPPLEMENTARY MATERIAL

Table S1. Equations for the estimation of each dendrometric factor (\* in Hz)

Unit	Auditory description	Duration (s)			Average Frequency*		Frequency range		Fundamental Frequency*		
		Average	Range		High	Low			Average	Range	
A <sub>1</sub>	flat, wideband, with a greater frequency range than A <sub>2</sub>	1.7	0.4	3.3	4103	102	0	16337.6	330.3	23.4	1921.9
A <sub>2</sub>	flat, wideband, with a higher average fundamental frequency	1.5	0.4	2.8	3479.9	117.4	56.2	9571.8	396.6	117.2	937.5
B	flat, wideband, with a larger frequency range than A <sub>1</sub> or A <sub>2</sub>	1.4	0.5	2.7	4319.1	207.5	9.9	14377.6	341.2	46.9	984.4
Bl <sub>1</sub>	clear harmonics, quick upsweep	0.5	0.4	1	2764.6	173.4	14.3	5262.8	393.7	75	1289.1
Bl <sub>2</sub>	no clear harmonics, quick upsweep	0.7	0.3	1.1	2872.7	189.9	48.9	6878.2	486.6	117.2	1101.6
F	low groan	0.7	0.1	1.6	1782.3	90.9	20.2	4240	309.9	70.3	1171.9
LU	long, tonal upsweep	3.3	1.8	4.3	8169.6	576.7	224.1	15388.2	877.9	656.2	3328.1
SU	short, tonal upsweep	1.2	0.7	1.5	8212.8	557.7	435.1	15782.2	715.8	515.6	1418
LD	long, tonal downsweep	2.6	2	3.2	9084.2	902.1	830.7	17959.5	1887.8	949.2	3726.6
SD	short, tonal downsweep	1	0.5	1.4	10359.9	966.8	751.6	19027.6	2687.9	1148.4	6398.4
S	squeak	0.3	0.2	0.4	15776.3	1922.7	1068.1	18157.3	2802.4	1195.3	5250

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Table S2. Additional information from data collection protocol and environmental parameters (when available) to compliment methodology.

Date	2 VIII 2013	9 VIII 2013	8 XII 2013	9 IX 2013	13 IX 2013
GPS points	W077° 25' 28.7" N05° 41' 18.6"	W077° 25' 28.7" N 05° 41' 18.6"	W077° 23' 44.0" N05° 38' 25.8"	W077° 24' 46.0" N05° 38' 11.2"	W077° 31' 0.5" N05° 34' 40.1"
Photos	NO	NO	YES	NO	YES
Recording length	00:34:41	01:43:03	00:39:01	00:50:00	00:58:06
Wildlife	None	None	None	None	None
Ph	NA	NA	8.5	NA	7.7
Salinity	NA	NA	26.0ppt	NA	23.3ppt
Air temperature	NA	NA	31.4°C	NA	30.0°C
Water temperature	NA	NA	27.6°C	NA	28.6°C
Wind speed	NA	NA	0.2 m/s	NA	4.3 m/s
Dissolved oxygen	NA	NA	5.87mg/L	NA	5.89mg/L

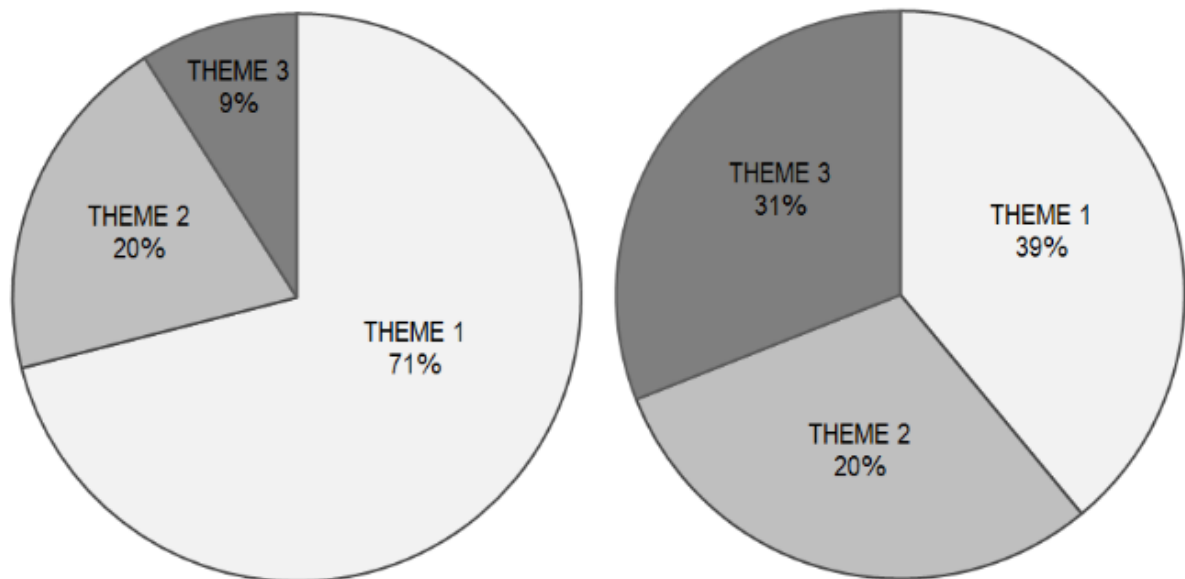


Figure S1. A. The relative theme representations for the Colombia 2013 songs. The dominant theme (theme 1) was sung for >70% of the song, and the minor themes (themes 2 and 3) were sung for 20% of the song or less. B. The proportion of total theme renditions (64) throughout the Colombia 2013 songs. Themes 1, 2, and 3 had 25, 19, and 20 renditions respectively.