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Diversity and abundance of marine mammal strandings along the SE/S Brazilian coast (2016-2018)

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Abstract

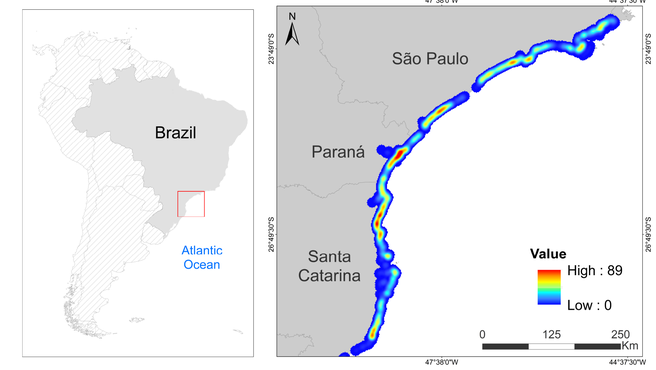
Since August 2015, marine mammals stranded between 25º05'S and 25º55'S have been recorded by the Santos Basin Beach Monitoring Project (Projeto de Monitoramento de Praias da Bacia de Santos - PMP-BS). The PMP-BS is one of the monitoring programs required by Brazil's federal environmental agency, IBAMA, for the environmental licensing process of the oil production and transport by Petrobras at the Santos Basin pre-salt province (25º05'S 42º35'W a 25º55'S 43º34'W), between 2100m and 2300m isobaths. As part of its goals, the diversity and abundance of marine mammals have been evaluated. A total of **1032.7Km of beaches on coastal areas and islands is monitored**, 79.7% of it being regularly monitored, and the remaining 20.3% only by responding calls from the local population. A total of **3532 marine mammals (495 pinnipeds and 3037 cetaceans) were recorded**, of which **92.4% were dead**. Thirty species were recorded, six of them from the order Carnivora and 24 from the infraorder Cetacea. Among the carnivores, the species with the greatest abundance was *Arctocephalus tropicalis* with 39.5% of the records. For cetaceans, *Pontoporia blainvillei* comprised 61.7% of the records, followed by *Sotalia guianensis* with 24.30%. While some species were relatively abundant, the following had only single records during the three years: *A. gazella, Balaenoptera physalus, Feresa attenuata, Kogia sima, Lagenodelphis hosei, Orcinus orca, Peponocephala electra, Physeter macrocephalus, Stenella attenuata* and *S. coeruleoalba*. Considering each year separately, **2016 presented the greatest species richness**, with 23 species, while **2018 had the highest number of animals**, with a total of 1338 records (2016 = 1223, 2017 = 971). The rarefaction curves were also calculated, indicating that the species richness has not yet been reached in this area. The monitoring program is ongoing and future data will probably allow identifying finer biogeographic patterns.

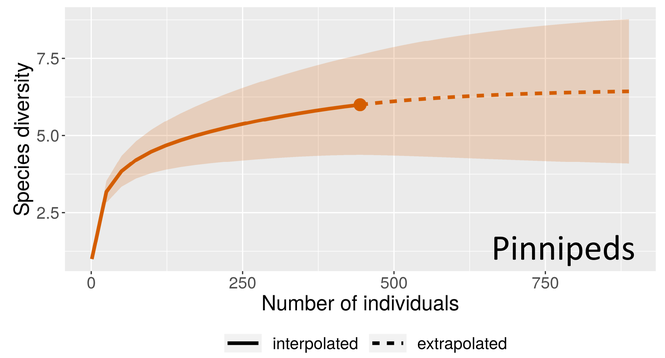
Beach surveys
- Daily, weekly or by calls from community
- Covering 1,032km of coast
- Total of 744,771.15 Km monitored

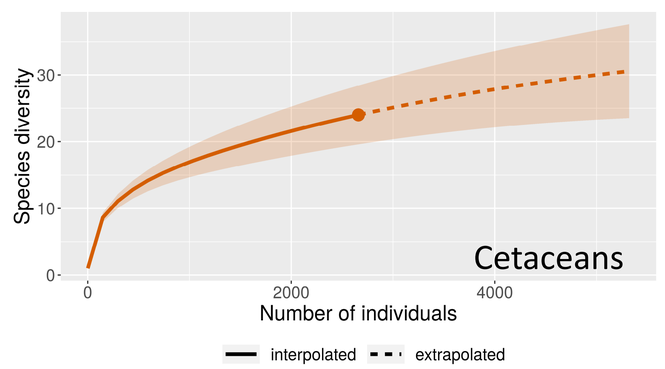
Jan-2016 to Dec-2018
- Seasonal changes in occurrence were observed
- Monitoring continues

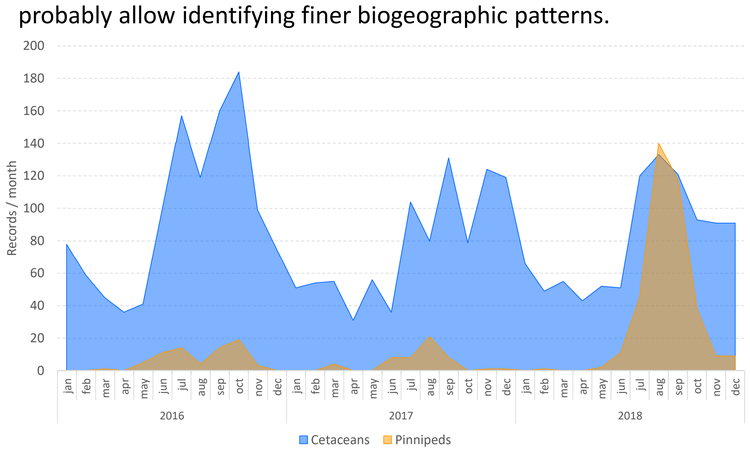
Abundances
- 2838 Odontocetes (*P. blainvillei* - 57.5%)
- 158 Mysticetes (M. novaeangliae - 36.1%)
- 495 Pinnipeds (A. australis - 72.7%)

Species richness
- Cetaceans 24
- Pinnipeds 6









Marine mammal ocurrence along the SE/S Brazilian coast, from jan/2016 to dec/2018

Word clouds indicate the relative abundance of species within mysticetes, odontocetes and pinnipeds recorded during beach surveys

PDF of this poster

A. Barreto VCard

Acknowledgements

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Rarefaction curves estimated using Chao, A., Ma, K. H., and Hsieh, T. C. (2016) iNEXT Online: Software for Interpolation and Extrapolation of Species Diversity. Program and User's Guide published at http://chao.stat.nthu.edu.tw/wordpress/software_download/