

FIN WHALE SONG VARIATION IN THE SOUTHEAST AND MIDDLE ATLANTIC

S. Klingshirn¹, W. Cioffi², L. Hodge², A. Read², D. Nowacek²

¹Wittenberg University, Springfield, OH 45502, USA ²Nicholas School of the Environment, Duke University Marine Laboratory, Beaufort, NC 28516, USA

Fin whales (*Balaenoptera physalus*) produce stereotyped pulse calls nearly year round in most of the world's oceans. The calls, referred to generally as 20-Hz pulses, are typically repeated in a regular song for minutes to hours and are thought to comprise a male only display. A prominent parameter of fin whale song is internote interval (INI), which is measured between each pulse and tends to be consistent within individual songs. Although attempts have been made to investigate population structure using song parameters, this is complicated by the fact that INI has been shown to change seasonally, typically shortening during the putative breeding season. Here, we investigate INI for fin whale songs recorded off the east coast from Virginia to Florida with High-frequency Acoustic Recording Packages (HARPs) deployed between 2014 and 2015. Fin whales along the U.S. Atlantic coast are assumed to be part of a single continuous population, but their migratory patterns and population structure are not well described for this area, despite significant conservation efforts on this species. To help address this gap, we examine the timing and magnitude of change in INI and other song characteristics at each of these sites and compare them to previous work analyzing calls recorded during the same months in Massachusetts and New York. In addition, we compare our results to findings in the eastern Pacific, where synchronous INI changes were observed across a comparable geographic scale. Our results will contribute to the understanding of fin whale population structure and seasonal behavioral patterns in the Atlantic and inform ongoing conservation efforts for this endangered baleen whale species.