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**Burst pulses produced by free-ranging bottlenose dolphins in Tampa Bay, Florida and Mississippi Sound, Mississippi**

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Investigations of the bottlenose dolphin's acoustic repertoire have mainly focused on whistles and echolocation clicks. However, despite their widespread occurrence, burst pulses have not received much attention. The primary function of burst pulses remains unknown and a comparative analysis can be used to advance our knowledge of the function of burst pulses. We recorded the acoustic repertoires of free-ranging bottlenose dolphins in the Tampa Bay and Mississippi Sound areas using broadband recording equipment. The two habitats differ in their environmental features, including water temperature, ambient noise levels and water turbidity. Our preliminary data show that several acoustic parameters such as peak frequency and center frequency of burst pulses differ among habitats. We also report other acoustic parameters, such as the number of clicks, inter-click interval, 3-dB and RMS bandwidth. In our ongoing study, we will examine relationships between environmental features of the habitats and the acoustic characteristics of burst pulses.