



Insights about the genetic diversity and population structure of an offshore group of common bottlenose dolphins (*Tursiops truncatus*) in the Mid-Atlantic

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ABSTRACT. Although the genus *Tursiops* has a worldwide distribution and is globally well-studied, some dolphin populations continue to face high risks of decline. Hence, it is necessary to assess the genetic diversity and structure of this genus to properly assess its conservation status and to implement appropriate management actions. In Brazil, genetic studies on this group remain rare, particularly for

populations inhabiting offshore waters. Saint Peter and Saint Paul Archipelago (SPSPA) is a small group of islands located in the Mid-Atlantic Ridge, where recent studies of the *Tursiops truncatus* group indicate that individuals are resident throughout the year around the archipelago, exhibiting considerable site fidelity. A previous study with this group indicated that the individuals form an isolated population. To test this hypothesis, and describe the genetic diversity of SPSPA individuals, we assessed 12 microsatellite loci and a portion of the mitochondrial control region. Bayesian analysis revealed that SPSPA bottlenose dolphins form a unique population. In a phylogeographic perspective, we found that individuals from SPSPA shared mtDNA haplotypes with inshore and offshore individuals from North Atlantic, suggesting that they are not currently isolated from their conspecifics. Mirroring mtDNA findings, microsatellite analysis revealed that most of the pairs of individuals sampled seem to be unrelated (83.8%) and no indication of inbreeding, what would be expected if a small population such as SPSPA was reproductively isolated.

Key words: Microsatellite; Control region mtDNA; Offshore islands; Conservation status