ABSTRACTS

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CAPES

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CONSERVATION PALEOBIOLOGY THROUGH COMPOSITIONAL FIDELITY OF MOLLUSCS IN THE PATOS LAGOON ESTUARY

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The construction of ports and harbors in marine and estuarine areas is important to the development of human populations, however, they may bring severe damage to the environment and its inhabiting organisms. These man-made structures can cause changes in hydrodynamics and water turbidity, heavy metal release, introduction of exotic and invasive species, impossex in mollusks, death of individuals and thus, ecological changes. In this context, we questioned if these effects cause some taphonomy alteration in the geological record, which is accessed by the compositional fidelity method *i.e* the ecological metrics comparison between live and its counterpart dead assemblages. The study region is the Patos Lagoon Estuary (RS, Brazil), which is influenced by the Port of Rio Grande since its construction in 1847. The live association was sampled throughout six sampling points between 2010 and 2018, and the dead association between 2018 and 2019, using a Van Veen grab (19 x 41 cm). In this study we are comparing live and dead assemblages through the relative abundance of *Erodona mactroides* Bosc, 1801 and *Mactra isabelleana* d'Orbigny, 1846, within and between species to establish the variation of this parameter over a much longer time series than the traditional ecological monitoring. Also, we will be dating a bunch of *M. isabelleana* individuals to test whether the higher abundance of this species would be correlated to elevated time-averaging since nowadays it is only found in dead assemblages inside the estuary. It is expected that there is a significant difference between live and dead assemblages for both species and that the abundance of *M. isabelleana* is correlated with time-averaging. This might show the port effects on the mollusk's assemblage, contributing to Conservation Paleobiology and guiding further studies in other ports along the coast of Rio Grande do Sul. [CNPq 422766/2018-6]