

## Late Holocene and Present Tropical Atlantic Ocean seawater temperature comparison based on stable isotopic proxies

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The Atmosphere and the Ocean are shown to be warming, in average, in the last century. However, locally this trend might not be the rule. In the Tropical Western Atlantic, long temperature time series are lacking and temperature proxies, such as  $\delta^{18}\text{O}$  obtained from coral skeletons are still on the process of being validated. Here we show results of an investigation on oxygen isotopes of 2 ky old coral skeletons from 13S in the Brazilian coastline. We investigated present and 2 ky old specimens of *Mussismilia braziliensis* and *Siderastrea spp.* (endemic) corals and show the effectiveness of recent *Mussismilia braziliensis* species as current environmental conditions archive of seawater temperature. Based on this relationship, we show that temperature seasonality in the Late Holocene was similar to what is experienced in the present, although the contrast between warm and cold months was smaller in the Late Holocene than in the present. Furthermore the temperature in the late Holocene may have been about 0.2°C warmer, differing from the global trend.

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