



CHRONOLOGICAL RECONSTRUCTION OF NW COASTAL DUNES OF CEARÁ STATE, BRAZIL IN THE LAST 3000 CAL YRS BP

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Dunefields are very common in the northern coastal zone of Northeast of Brazil. They have the potential to yield important information about winds and paleo-winds regional and their response to sea-level fluctuations during the Holocene. The study area is located within the northeastern semi-arid coast of Brazil in the state of Ceará. The largest dunefields in Brazil occur along the northern coast this region. We reconstruct the coastal dunes geochronological evolution of NW, Ceará State - Brazil in the last 3000 cal years BP, using detailed analyses of lithostratigraphy, microfossil (foraminifera), wind regime, dune monitoring and 8 radiocarbon dating. The chronology was reconstructed through ¹⁴C eolianites dating and monitoring of the transversal mobile dunes movement processes. Radiocarbon dating results indicate that the dunes correspond to eolianites revealed ages between 2760 - 2480 and 980 - 750 cal yrs BP, suggesting that the vast transversal mobile dunefields formed after this period in similar condition to the current sea-level. Considering that material transportation by the prevailing east winds towards the transversal dunes is estimated to be on the order of 11.0 m/year, the aeolian system current is less than 1000 yrs BP.

Palavras-chave: Dunefields, radiocarbon dating, eolianites and mobile transversal dunes.

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