

The Late Cretaceous Caiuá Desert (Bauru Basin, Brazil)

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Bauru Basin was an intracontinental subsiding area on the South-American Platform central-southern part, during the Late Cretaceous, that was filled by a sandy sequence (~300 m thickness). On the southern part of the basin a wide sand sea (~100,000 km²) was developed, under hot desertic conditions. The sequence comprises: a) deposits of dry sand sheets (Santo Anastácio Fm.); b) deposits of medium size dunes and humid interdunes of the sand sea peripheral zones (Goio Erê Fm.); and c) deposits of complex large size eolic dunes (draas), corresponding to the central part of the inland sand sea (Rio Paraná Fm.). These formations compose the Caiuá Group.

The Rio Paraná Fm. (fine to medium quartz sandstones) shows medium to large-scale tabular cross-bedding. Seismites of metrical dimensions could locally be observed. The Goio Erê Fm. (fine to medium quartz sandstones), is composed by medium to small-scale trough cross-bedding (festooned pattern), with prevailing medium to low dips. It frequently exhibits calcite cement, which could be associated with centimetric calcitic nodules (calcretes). The Santo Anastácio Fm. (fine to very fine quartz sandstones, and subordinated silt), occurs in massive tabular beds of metric thickness, occasionally with poorly defined stratification (low dip plane-parallel or cross-bedded).

Paleocurrent analyses of cross stratification data indicate a remarkable stability of SW transport direction.