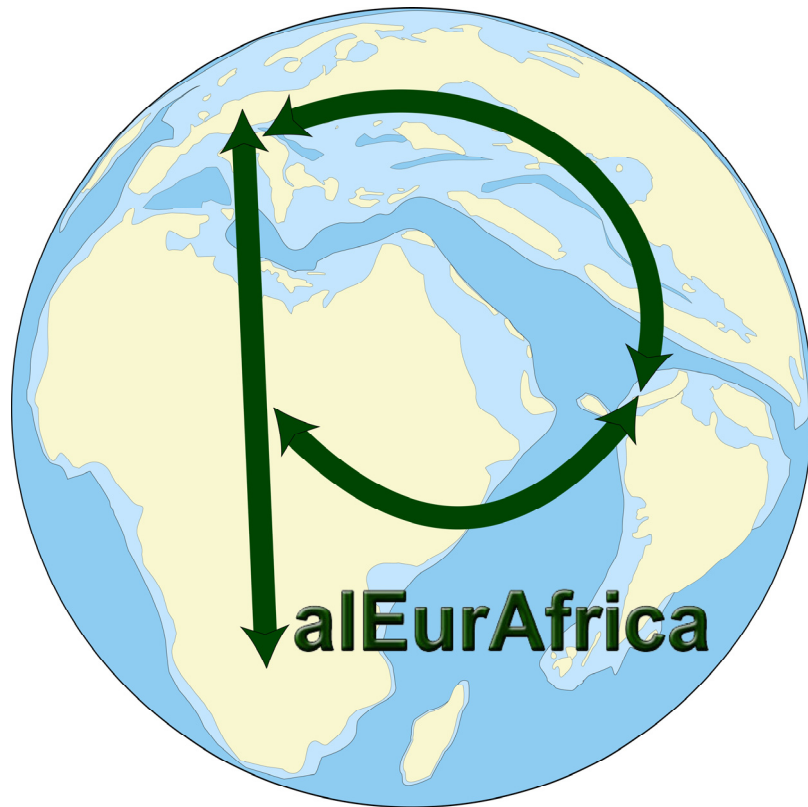


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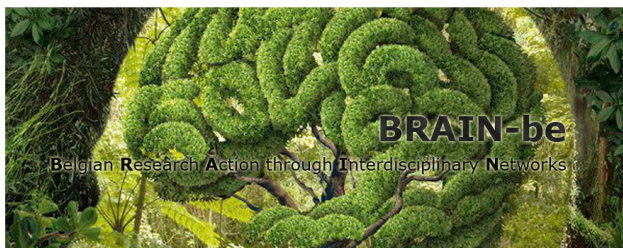
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Dinoflagellate cyst biostratigraphical and palaeoecological analysis of the early Paleogene Landana reference section, Cabinda Province, Angola

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Systematic palynological analysis of the Landana section has revealed 90 distinct dinoflagellate cyst taxa and has resulted in the establishment of a novel preliminary dinoflagellate cyst zonation. The zonation comprises three distinct dinoflagellate cyst zones and five unzoned, yet otherwise distinct intervals, spanning the ?Danian/early Selandian to Eocene/early Oligocene. The Landana record, which represents the first extensive sub-equatorial African Paleogene dinoflagellate cyst record, was extensively compared and correlated with contemporaneous records relatively close by in the Gulf of Guinea, as well as with records from more distant locations such as Antarctica, Australia and New Zealand. The ?Danian–Selandian segment of the record is characterized by the presence of taxa such as *Alterbidinium? pentaradiatum*, *Isabelidinium? viborgense*, *Isabelidinium cingulatum* and *Spinidinium densispinatum*. The Thanetian through Ypresian succession is far more fragmentary and is devoid of any significant marker taxa. The few dinoflagellate cyst-bearing samples in the uppermost part of the record point to an Eocene to early Oligocene age. The dinoflagellate cyst assemblages are very variable, with several dinoflagellate cyst taxa and ecological groups and complexes rising to dominance successively. Overall high TOC values, significant enhancements in %TP and intervals dominated by presumably heterotrophic dinoflagellate cysts, suggest periods of significant palaeoproductivity and nutrient availability resulting from either heightened terrestrial influence or enhanced upwelling. The overall dinoflagellate cyst assemblages concur with the recorded marine vertebrate faunas and the available sedimentological data that point to a coastal/shallow marine setting for the ?Danian–Ypresian succession.

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