

# Biostratigraphic and Paleoenvironmental Characterization of Cretaceous Carbonate Deposits in the Ivorian Offshore Sedimentary Basin (Côte d'Ivoire)

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## ABSTRACT

The biostratigraphic characterization of the carbonate levels of the Cretaceous age of the offshore sedimentary basin of Côte d'Ivoire was possible thanks to a palynological and micropaleontological study of the drilling times of two boreholes (SN-X and DH-X). These sediments provided a rich microfauna consisting of species such as *Ticinella madecassiana*, *T. primula*, *T. raynaudi* and *T. roberti* associated with a rich microflora composed of spores and pollen grains such as *Appendicisporites potomacensis*, *Cicatricosisporites venustus*, *Appendicisporites baconicus*, *Ephedripites* sp., *Schizea sure* and *Elaterosporites klaszi* characterizing the Upper Albian. This study highlights several stages including the Cenomanian thanks to the *Globigerinelloides foraminifera bentonensis*, *G. caseyi*, and pollen grains *Steevesipollenites cupuliformis*, and *Ephedripites barghornii* and the Turonian by planktonic foraminifera *Heterohelix moremani*, *Hedbergella planispira*, *Whiteinella archaeocretacea*, *W. baltica*. The Lower Senonian is marked by the planktonic foraminifera *Hedbergella delrioensis*, *Heterohelix globulosa*, *Heterohelix succeeded*, and the \_dyncocysts *Oligosphaeridium complex* and *Dinogymnium westralium*. The Campanian is highlighted by the presence of dinocysts *Circulodinium distinctum* and *Hystrichodinium pulchrum*.

Biostratigraphic analysis of these carbonate sediments, the paleoprovinces have been determined and are located in the internal, middle or external neritic domains. The massive limestones were emplaced between the Upper Albian and the Lower Senonian, the matrix being present generally in the Lower and Middle Albian. Frank carbonate sedimentation took place between the Middle Albian and the Lower Senonian, with a maximum in the Upper Albian.

**Keywords:** Biostratigraphy, Paleoprovince, Carbonate, Cretaceous, Ivory Coast

