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PII:	S1464-343X(17)30279-0
DOI:	10.1016/j.jafrearsci.2017.06.023
Reference:	AES 2946
To appear in:	*Journal of African Earth Sciences*
Received Date:	23 January 2017
Revised Date:	20 June 2017
Accepted Date:	26 June 2017

Please cite this article as: Abdulkarim H. Aliyu, Y.D. Mamman, M.B. Abubakar, Babangida M. Sarki Yandoka, John Shirputda Jitong, Bukar Shettima, Paleodepositional environment and age of Kanawa Member of Pindiga Formation, Gongola Sub-basin, Northern Benue Trough, NE Nigeria: Sedimentological and palynological approach, *Journal of African Earth Sciences* (2017), doi: 10.1016/j.jafrearsci.2017.06.023

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Paleodepositional environment and age of Kanawa Member of Pindiga Formation, Gongola Sub-basin, Northern Benue Trough, NE Nigeria: Sedimentological and palynological approach

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Abstract

Sedimentogical and palynological investigations of the Kanawa Member of Pindiga Formation in the Gongola Sub-basin, Northern Benue Trough, NE Nigeria were carried out in order to determine the paleoenvironment and age of the sediments. Three main lithofacies were identified from the measured sedimentary log section, namely; the wave rippled sandstones, the limestones (with ammonites, bivalves and gastropods) and the clay-shale. The facies were interpreted to have been deposited in a marine environment. Based on palynological studies, Kanawa Member consists of two palynozones, namely; Cretacaeiporites scabratus and Triorites africaensis. The Triorites africaensis zone is characterized by species of T. africaensis, Gnetaceaepollenites sp. 1, Cretacaeiporites polygonalis, Monosulcites sp., Cretacaeiporites scabratus, Elaterocolpites castelainii and is dated Late Cenomanian whilst the Cretacaeiporites scabratus zone is characterized by the dominance of C. scabratus, C. mulleri and Tricolporopollenites sp and is dated Early Turonian . The Kanawa Member is therefore, dated Late Cenomanian to early Turonian..

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