

Coral Reef Bioconstructions and Their Biodetritic Equivalents: a Tool for the Terminal Miocene Paleogeography of the Southern Edge of the Southern Rifian Corridor (Morocco)

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The Terminal Miocene coral reefs and their biodetritic equivalents of the Southern Rifian Corridor belong to the largely developed Mediterranean reef complexes.

The hermatypic Scleractiniaire fauna is relatively poor, generally represented by *Porites lobatosepta* and incidentally by *Tarbellastraea reussiana*. This oligospecificity is related to the Middle Miocene-Tortonian boundary climatic cooling.

Rhodophyceae, a fundamental biotic group among the Corals, belong primarily to the Melobesioideae, Lithophylloideae, and Mastophoroideae subfamilies; Corallinoideae are very rare.

Foraminifera, Bryozoa, Molluscs, Anellids and Sea urchins compose the accompanying fauna.

The characterization of the ecosystems, based on coral morphoses, facies and microfacies, allowed to define:

highly diversified Reef environments with locally complete paleoecological spectrum, indicating fairly developed marine platforms (Tazouta, south-east of Fes);

diversified Reef environments, characterized by "patchreefs" of medium back reef or internal platform (Aghram Amallal, south-east of Fes and Agouran, south of Meknes);

monotonous Reef environments (*P. lobatosepta* being almost the unique constructor), corresponding to narrow marine platforms (El Ouata and Bir Tam Tam areas, south-east of Fes);

environments where the Reef preparation stage is only locally clear or visible, characterizing small or non-coralline marine platforms (Sefrou area, Al Mehraz, Mechka, Ribat Al Khayr et al Menzel, south-east of Fes).

This leads to a regional paleogeography where in the Eastern Skoura basin (Tazouta) a fringing reef underlined a sub-meridian shoreline, in the Aghram Amallal and Agourai sectors the "patch reefs" were located near fluvial paleomouths, in the El Ouata and Bir Tam Tam area the built terms colonized a marine deltaic front system with marine communications and, finally, the small or non-coralline platforms of Ribat Al Khayr, Al Menzel, Mechka and al Mehraz indicate an intramontane sea arm, and sometimes the paleoshorelines (Sefrou area).

The paleogeography of this part of the southern edge of the Southern Rifian Corridor testifies to a generalized marine invasion able to reach the heart of the folded Middle Atlas. This enabled us to review the paleo-reliefs and to highlight important vertical movements postdating the reef period.

Keywords: Coral reef; Biodetritic; Miocene; Rifian Corridor; Morocco