

Microfacies and biozonation of a carboniferous mixed ramp, tindouf basin, Algeria

[Microfaciès et biozonation de la rampe mixte carbonifère du bassin de tindouf, Algérie]

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Abstract

The marine Carboniferous succession of the Tindouf Basin is poorly known. This preliminary note concentrates on the Tournaisian-Serpukhovian interval. It primarily deals with the sedimentation and the microfossils of the southern part of the basin. Moreover, sedimentological and micropaleontological data are also provided for the northern and central part. Sedimentological study enables recognition of 12 microfacies ranging from open marine below storm wave action to supratidal with continental influx. The proposed model is that of a homoclinal ramp marl-sandstone-limestone interrupted by numerous tempestites. Sedimentary cycles in the Late Viséan are particularly numerous. Calcareous algae are mostly Stacheiinae and benthic foraminifers, Archaediscidae and Endothyridae. The prolific Late Viséan assemblages become scarce in the Serpukhovian and peter out in the Bashkirian. This reflects the progression from a marine ramp to a paralic basin. We propose a regional biostratigraphic scale based on the biozones of MAMET (1974) and of LYS (1986) which are correlated with those of Conil in CONIL et al. (1990).

Keywords : Algae; Algeria; Microfacies; Serpukhovian, shelf environment, tempestite, biozones, benthic foraminifers, calcareous; Tindouf basin; Tournaisian; Viséan.