



# NONGENICULATE CORALLINE ALGAE FROM THE EARLY MIOCENE TO LATE HOLOCENE SEQUENCE OF THE PORBANDAR AREA, SAURASHTRA, WESTERN INDIA

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## ABSTRACT

The Southeastern coast of Saurashtra, western India, in and around the Porbandar area, exposes sediments of Neogene-Quaternary age. These sediments are classified into: Gaj Formation (early Miocene), Dwarka Formation (early-middle Miocene), Miliolite Formation (early middle-late Pleistocene) and Chaya Formation (late Pleistocene-late Holocene). The limestone is a dominant lithology of all these stratigraphic subdivisions. In the present paper, we describe six nongeniculate coralline algal species, namely *Lithophyllum dentatum* (Kutzing) Foslie, *Lithophyllum incrustans* Philippi, *Melobesioideae* gen. et spec. indet., *Mesophyllum curtum* Lemoine, *Sporolithon statiellense* Airoldi and *Lithoporella melobesioides* Foslie. The coralline algal assemblage indicates that the Dwarka Formation was deposited in marine tropical environment with high energy conditions at depths from intertidal to 60m in tropical water. The Adatiana Member of the Miliolite Formation was deposited under shallow marine tropical environment with moderate to low energy conditions with bathymetry fluctuating between intertidal to 60m in tropical water and the Porbandar Calcarenite Member of the Chaya Formation was deposited under tropical to subtropical marine environment with bathymetry in the range of 40m to 60m having moderate to low energy conditions.

**Keywords:** Coralline algae, Neogene-Quaternary, Palaeoenvironment, Porbandar, Saurashtra.