



GASTROPOD DIVERSITY PATTERNS AND EVOLUTIONARY TEMPO DURING THE EARLY RIFTING PHASE (JURASSIC) OF THE KUTCH BASIN

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ABSTRACT

The Kutch sea formed as a result of Gondwana fragmentation about 170 million years ago. This newly opened up sea-way between Africa and India provided new habitats for the immigrant faunas which invaded the Kutch Basin. They underwent rapid speciation events as clearly evident from diversity patterns of different taxa of Kutch. The present paper deals with the diversity patterns and evolutionary tempo shown by the gastropods during the Late Bathonian to the Oxfordian. Archaeogastropod community is the most diverse group in Kutch (Das *et al.*, 1999, 2005; Jaitly *et al.*, 2000; Das, 2004), showing strong Tethyan affinity, especially with Europe at genus level, but display stunning endemism at species level. The great diversity and abundance of the Kutch species can be explained by the range of expansion of the genera from their ancestral area. Mass migration or colonization of the European forms into Kutch also coincided with a global marine transgression. The extensive shallow epicontinental sea with a large habitable area and subtropical palaeolatitudinal position of Kutch are two other extrinsic factors for the great diversity.

Keywords: Gastropod diversity patterns, evolutionary tempo, Jurassic, Kutch Basin