

Palaeogene Fish Otoliths from Lignite Associated Succession (Cambay Formation) Khadsaliya, Bhavnagar, Gujarat, India

Lachham Singh, Raman Patel and Rajendra Singh Rana*

Department of Geology, HNB Garhwal University, Srinagar (Garhwal)-246174, India

*E-mail: rajendra.rana1@gmail.com

Abstract

Ten genera and seventeen species of teleostean taxa of otoliths were recovered from the Khadsaliya clays (Cambay Formation) exposed in Khadsaliya open cast lignite mine, Bhavnagar, Gujarat. This was done by screening and washing of ~500kg rock matrix of which ten species are new viz. *Palaeogadus elongatus* sp. nov., *P. lanceolati* sp. nov., *Ampheristus bhavnagarensis* sp. nov., “genus *Batrachiodidarum*” *eocenous* sp. nov.,” genus *Opisthognathid*” *sahnii* sp. nov., “genus *O*” *khadsaliyensis* sp. nov., *Apogon nolfi* sp. nov., *A. closeostiumus* sp. nov., *A. cambayensis* sp. nov. and “genus *Uranoscopidarum*” *ellipticus* sp. nov. The present day relative of these represented taxa occurs in the marine realm while some of them penetrate into fresh water such as pristigasterids, atherinids, centropomids, ambassids and ophidiids but the primary freshwater fishes are absent. The present taxa are mainly confined to tropical, subtropical, very shallow, near shore habitat and the mesopelagic and deep water bottom fishes are also absent. In general, the present fish taxa suggests a protected shallow marine environment and not widely exposed ocean realm and may be regular influx of fresh water or may be estuarine of protected bay.

Keyword: Otoliths, Teleost, Palaeogene, Maceration, Bhavnagar, India