Short communication

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Distribution And Affinities Of Ostracod Fauna Of Chorgali Formation Of (Eocene) Jhalar Area, Kala Chitta Range, District Attock, Pakistan

R. A. LASHARI, P. A. USMANI, AND A. H. MARKHAND
e-mail: usmani_parveen@yahoo.com, markand.akthar@usind.edu.pk
Center for Pure and Applied Geology, University of Sindh, Jamshoro
Corresponding author: R. A. LASHARI, email: r_lashari@yahoo.com, Cell: 92-3332628758.

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Abstract: The investigation of Ostracod fauna of Chorgali Formation Lower Eocene from Jhalar area district Attock, revealed that the fauna are unevenly distributed. These forms bear close affinities with the Ostracod fauna of the similar horizon of Sulaiman Range and Rajasthan basin, India.

Keywords: Chorgali Formation, Sulaiman Range, Rajasthan basin and lower Eocene

1. INTRODUCTION

The Ostracod fauna of Eocene beds of various localities of Pakistan and India, however, known in much detail through the works of Latham (1938), Sohn (1959), Tewari and Tendon (1960), Lyubimova et al., (1960), Rajagopalan (1962), Guha (1965, 1967, 1968), Guha et. al., (1965), Shalla (1965), Tewari and Singh (1966), Srivastava (1968), Siddiqui (1971), and Baryar et. al (1990). With the intention of investigating the little known Ostracod fauna of the Upper Indus Basin, the study of available samples of Chorgali formation (Lower Eocene) of Jhalar area, district Attock was carried out. Because of poor preservation and deformation of rock samples those fauna are studied which are already described in the literature or bear close resemblance with the fauna of adjacent basin. In the present study the regional distribution pattern and faunal affinities with respect to Ostracod assemblage described from adjoining Cenozoic area was established.

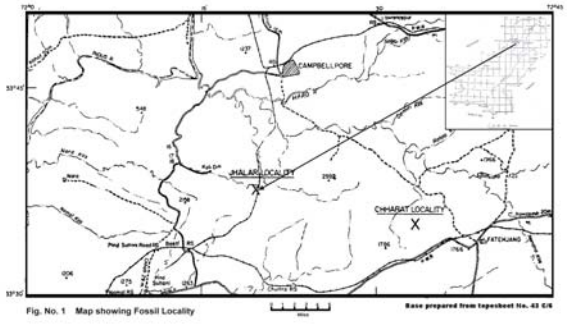

Fig.1. Map showing fossil locality

2. MATERIAL AND METHOD

The samples for this study were taken from Jhalar area in Kala Chitta Range Lat. 33^0 $38^/$ N, Long. $72^0 20^/$E. **(Fig. 1)** toposheet No. 43 C/6 in district Attock. The area is tectonically disturbed (highly folded and faulted). The sampling of Chorgali Formation was carried out along East and West of the railway line from Jhalar Railway station to Tunnel No.1.

About 20 samples were taken at different intervals, few samples were found to be rich in Ostracods and rest of the samples because of deformation and nature of preservation could not yield identifiable Ostracods.

The Formation consists of limestone and shale. The limestone is greyish to yellowish, brownish grey in colour, weathers cream and whitish grey, nodular, jointed and fossiliferous. The shale and marly shales are greenish grey in colour weathers brownish grey and is more prominent in lower part. The upper contact with Kuldana Formation and lower contact with Margalla Hill limestone is conformable.

3. RESULTS AND DISCUSSION

The Ostracod fauna of Jhalar area comprises 20 taxa. The fauna are unevenly distributed. Generally it is more abundant in some samples, and few samples are totally barren, some samples are rich in benthonic foraminifera (Fig. No.2). The fauna commonly occurring in the studied Chorgali Formation consists of, *Alocopocythere longilinea, Anommatocythere confirmata, Anommatocythere laqueata, Aglaiocypris sp. cf. A.indica, Bairdopilata kirtharensis, B. poddari, . Brachycythere sp. cf. B. rajasthanensis, Bythocypris sp. cf. B. westi, Echinocythere contexta, Gyrocythere grandilevis, Hornibrookella avadeshi, H. sp.cf. H. jaisalmerensis, H. subquadra, H. directa, Macrocypris sp. cf. m. guhai, Paracypris sp, Parakirthe pandei, Schizocythere prolata, Hermanites cracens, Uroleberis khosla, Uroleberis sohni, Xestoleberis subglobosa.*

CythereHoidea mannargudi. Echinocythere sp. cf. E. jaini. Paracytheridea eocenica Pakistanella prima and Cytheropteronsp.

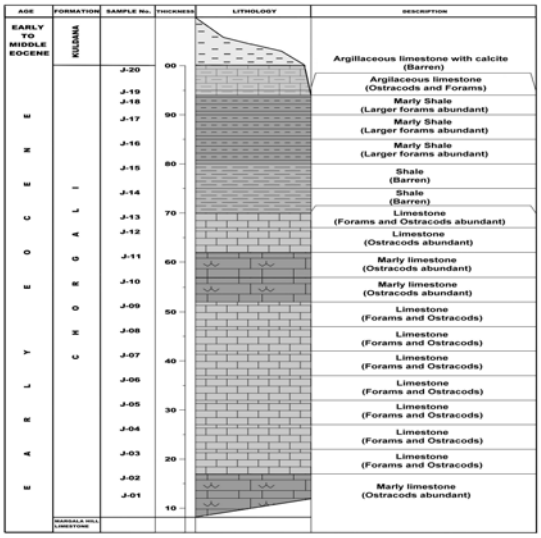

Fig. No. 2

Age and Affinity of Ostracod Fauna

The Ostracod genus Anommatocythere was first described by Sohn (1970) from meting limestone, Lower Eocene of Sindh. *Anommatocythere confirmata* and *A. laqueata* along with other Ostracods were described by Siddiqui (1971) from surface samples of Lower Chocolate clays and Upper chocolate clays (Lower part), Lower Khirthar Formation, Middle Eocene of Rakhi Nala and Zao River sections in Sulaiman Range.

Anommatocythere confirmata, A. laqueata, Schizocythere prolata occurs in Lower part of the Upper Paleocene of Sor Range section where as *Schizocythere gujaratensis* Guha ranges through the Green and Nodular Shales and Rubbly Limestone (middle part of the Lower Eocene) of Ghazij Formation in Rakhi Nala section and Zao River section of Sulaiman Range (Middle Eocene). *Hornibrookella subquadra, H. directa* reported in this paper are also reported from the similar horizons of Sulaiman Range and Rajasthan basin. These forms may be considered as Index form in this region.

4. CONCLUSION

The Ostracod assemblage of Lower Eocene (Lutetian) (Chorgali Formation) of Upper Indus Basin bear close resemblance with the Ostracoda of Sulaiman Range, Southern Lower Indus Basin and Rajasthan Basin in particular. The forms described here are also reported from almost the same stratigraphic horizons of Sulaiman Range, southern Lower Indus Basin and Rajasthan (India) in particular. This indicates the close affinity of the Ostracod fauna of this region with the adjoining Rajasthan Basin in the East.

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