Evidence of Neo-tectonic activity along the East coast of Indian peninsula

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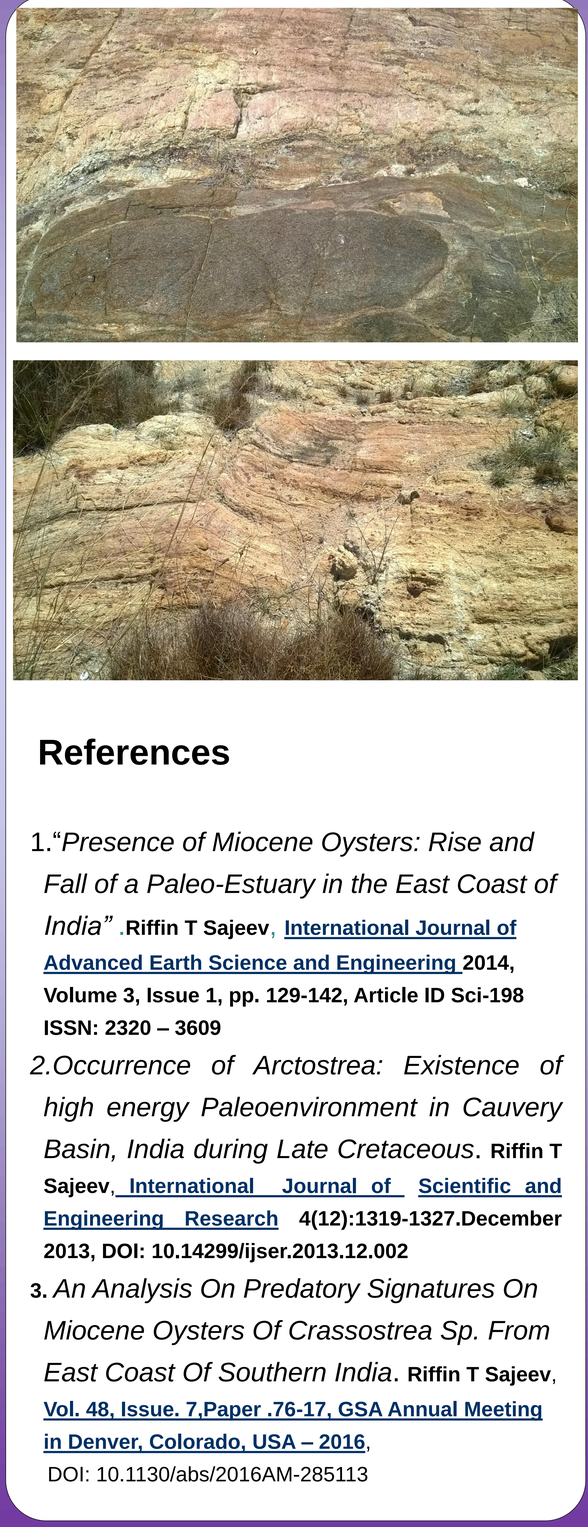
ABSTRACT

Geological Society of America Abstracts with Programs.

Vol. 49, No. 6. doi: 10.1130/abs/2017AM-293786.

The eastern coastal plains of the Indian peninsula are studied meagerly based on its tectonic aspects. In the previous ventures, the author reported the paleo-chronological existence of a large estuary, on the basis of fossils of Crassostrea Sp. Dating back to the mio-pliocene Epoch. The author suggests that the paleo-estuary ceased in existence due to a marine regression caused by a regional uplift in between the present day trajectories of the rivers Thamirabharani and Nambiar. The natures of structural characteristics seen in the regional outcrops of the basin indicate a dominant neo-tectonic feature. Brittle slip faults are abundant in these rocky outcrops containing Khondalite beds. Shearing is visible almost anywhere. This may be caused by the near proximity of the study area with the Achankovil Shear Zone (AKSZ). A second look at the trajectories of the rivers and drainage mentioned above and the structural features on the outcrops indicate that the uplift is neo-tectonically induced rather than shear induced. During site exploration, the author found rocks of volcanic origin distributed randomly over the study area. Till this date, the geological community had approached volcanic/ neo tectonic activities in this area only through speculations without any physical, visible evidence. The presences of chunks of volcanic rocks are an acute visual evidence of an event of volcanic nature. Through this study, the author aims to analyze the extent of uplift and its impact on the drainage systems of the rivers on its either side and their divide migration possibilities. The neo-tectonic aspects of the region are analyzed and any solid evidence of active volcanism is collected and studied. The study is primarily aimed to report the existence of neo-tectonic activity in the south eastern coast of India.



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