Identification of Paleotsunami Deposits Based on the Distribution of Ostracoda and Foraminifera Assemblages from Trench/geo-slicers Sections Collected Along the Collinpur Mud Flats, Southandaman Island, A&N Islands

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We present the data obtained from a filedwork carried out along the west coast of south Andaman Island near Collinpur mudflat area. Few trenches were made in addition to geoslicer sections, to find out signatures of paleostunami deposits. The sedimentological characteristics such as organic matter, calcium carbonate content of the samples were evaluated. The relative abundance of sand, silt and clay of all the sediment samples were estimated and plotted on trilinear diagrams. In addition to sedimentological analysis, all sediment samples were subjected to standard microapaleontological techniques to retrieve the Ostracoda and Foraminferal fauna if at present to know their faunal province and distribution.

The following species were identified from sediment successions exposed in the trenches (geoslicer) at various depths along the coastline. In the Trench-I, from 44 to138 cm depth, there is no faunal evidence, whereas top and bottom units show evidence of some faunal assemblages, such as *Loxoconcha* sp, *Bairdoppilata alcyonicola, Bolivina* sp., *S. tenuis, Neomonoceratina inqua, Elphidium crispum, Ammonia dentata, Planorbulinella sp, Keijiella* sp and *Mutilus* sp. It is suggested that the top and bottom units are distributed with the shallow marine forms, which may be a tsunamigenic deposit. In Trench-II, from 40 to 104 cm, no fauna were recorded. However, top and bottom units shows occurrence of some species, such as *Amphistegina laevigata, Elphidium craticulatum, Macrocyprina* sp, *Alveolinella* sp, *Bolivina hadai, Quinqueloculina* sp, *Chrysocythere keiji, Rectobolivina raphanus, Hemicytheridea* sp, *Lankacythere reticulata, Brizalina striatula* and *Tanella gracilis.* Distribution of the faunas from the top and bottom exposed in Trench-II also suggests deposition under shallow marine environment, hence have possibility of having deposited by tsunami wave. Trench-III sequence is deposited with species, such as *Ammonia tepida, Asterorotalia dentata, Assillina ammonoides, Mutilus pentoekensis, Loxocorniculum* sp, *Calcarina calcar, Gavelinella eicherin* sp, *Elphidium discoidale* and *Caudites javana.* Trench -IV location, no faunal evidence is noticed.

The sedimentological parameters (calcium carbonate, organic matter, & sand-silt-clay ratio) were determined from all these samples and they show almost a positive correlation with the faunal distribution. The occurrence of foraminifers and ostracods in the above trenches is characteristic of an assemblage under marine influence preferably the shallow marine in nature.