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## A GEOARCHAEOLOGICAL STUDY ABOUT FOSSILIZATION AND PALEOENVIRONMENTAL RECONSTRUCTION OF RATNAPURA DISTRICT

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### ABSTRACT

Ratnapura district belongs to the wet zone in Sri Lanka. It has very rich biodiversity. The name “Ratnapura Series” has been given to a group of river and lake deposits they have accumulated in the strike valleys of Sabaragamuwa Province. Ratnapura district of Sri Lanka is very important as a Pleistocene Epoch fossils deposit, and it is more similar to the Narmada Shivalic Pleistocene fossils in India. Fossils are preserved remain or trace of animals, plants and other organism from living the remote past. The main objective of this study was to identify fossilization process and buildup the interrelationship between the Paleontology and Archeology. The research was carried out in literature investigation, field investigation and laboratory analysis. Field sampling was carried out during the six month. The sediments from gem pits were collected with an interval of two meters. In addition, landscape of the area, soil color and texture properties and other important findings were recorded. The fossilization process is a good evidence to reconstruct in Palaeoenvironment. The Geological methods which Sieve analysis and Hydrometer analysis were used to analyzing Fossils beds. When having heavy rains to the upper mountain areas much water flows through those rivers and streams, and spread floods on the valley as well as sediments were regularly deposit there. Depositing time is changed according to the grain size. Those are deposited under the calm environment. There are more silt and sand in the compound of soil layers, and that was the reason to condition of Silicification. The Silicification is the process in which organic matter becomes saturated with silica. This structure based on the floodplains climate conditions. When solidification activities were occurring SiO<sub>2</sub> were Increased. Therefore this solidification helped to fossilization.

**Keywords:** Fossilization, Geoarchaeology, Palaeoenvironment, Reconstruction, Ratnapura