

Identification of the Weathering and Conservation Processes on Archaeological Heritage Site in Sigiriya

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Sri Lanka has richest archaeological sites in Asia. Sigiriya(Lion Rock) is one of them and an ancient rock fortress located in the northern Matale District near the town of Dambulla in the Central Province. Sigiriya is the one of the valuable site in the country which is currently suffering from deterioration due to weathering. The main objective of this research is to identify the weathering process and make suggestions to prevent or control weathering process under the values-based management concept of heritage management in Archeology. Weathering, involves a multitude of physical, chemical, and biological processes. Rocks are normally resistant to weathering. However, the resistance depends on the rock's mineral porosity and mineral composition. In fact, physically soft minerals are broken apart and crushed easily, but with the harder minerals, it is quite difficult. The entire weathering process on the rocks depends on the arrangement of the mineral grains and size of a certain rock. Some of the rocks like, limestone susceptible to weathering easily. Granite is a perfect example of a rock that is highly resistant to weathering. The research methodology was carried out in three steps. They were literature investigation, field investigation and laboratory analysis. In addition, Observation, Interview, and Discussions were used to collect the field data. Both Qualitative and quantitative data have been used for analysis part of this research. According to the findings of this research, there are some important places and monuments were identified which needs rapid conservation. In fact, according to findings it is suggested a values-based management method which includes Identifying signification of site, develop management policy, develop heritage management strategies, implement heritage management strategies and monitor and evaluate to control and prevent this weathering effects.

Keywords: weathering; archeological monuments; metamorphic rocks; controlling; heritage management