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Calcarenitic stones of the Apulia region (Southern Italy): the quarries of the "pietra gentile"

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This research concerns the study of calcarenitic materials, widely used in the Mediterranean basin both in historical and archaeological context. It is aimed to study the characteristics of these materials in order to understand their behaviour in terms of durability, as well as to correlate materials from quarries and artefacts. The identification of the quarries of provenance is aimed to obtain historical information on the exploitation of stone materials, but also to find stone resources for interventions of substitution. This paper deals with the study of a variety of stone, among the calcarenitic materials characteristics of the Apulia region (Southern Italy), named "pietra gentile", which outcrops in the area between the provinces of Bari and Brindisi; thanks to its characteristics of soft stone it combines good technical properties and performance with a relative facility of extraction and cutting. For these reasons this calcarenite is used since the ancient time as constituent material in archaeological artefacts, as well as constructional materials in historic buildings of the area. The study for the identification of ancient and active quarries has been carried out. It is based on: bibliographic and archive research; identification and census of the extraction sites by means of analyses of aerial photographs and field survey; mapping of the ancient and active quarries; study of the quarry characteristics (dimension, extent of the exploitation, extraction ways, potentiality of the stone resources, etc); preliminary mineralogical, petrographic and porosimetric study of representative samples from different quarries. All the information collected will go to make up a databank finalised towards the knowledge and documentation on historical stone resources. This study is the preliminary step of a wider research aimed to the improvement of the knowledge of this stone material, in order to identify significant parameters for the provenance determination of the materials of the artefacts, as well as correlation parameters between the intrinsic

characteristics of the stone and its durability.