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Historical dimension stones from the carbonate Apennines of Campania region (Italy)

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Since 90's, a multidisciplinary research has been carried out on the heritage stone materials of Campania region, southern Italy, with the main aim of raising again the status of local dimension stones. In fact, such resources, which have gained prominence over centuries due to their utilisation in artistic and architectural masterpieces, in the last decades have been abandoned and neglected.

In Campania region, the most important dimension stones derive from Late Quaternary volcaniclastic and Mesozoic-Tertiary sedimentary formations; both groups were extensively used for the historical buildings of the region, even though their urban distribution was uneven.

As regards the sedimentary lithotypes, although numerous studies focused on their sedimentological and stratigraphical features, little is known about their mineralogical, petrophysical and geomechanical properties. The present study aims to fill this gap by investigating the relations between geological characters and petrophysical properties of the Bellona, Padula and Bisaccia stones, three of the historical carbonate dimension stones from Campania region; their main quarrying sites are located in the Caserta, Salerno and Avellino province, respectively. New mineralogical, petrographical and engineering-geological data are here provided, along with some considerations on the weathering phenomena affecting the stones.