

## **Il degrado chimico-meccanico negli ipogei salentini e l'acqua "da invasione": casi di studio**

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### **Abstract**

This contribution collects the studies carried out in the last five years on hypogean environments, used as workplaces, in rural areas ("trappeti", or underground workplaces for cold pressing of olives; snowfields; foundations for oil collection etc.) in Salento (Puglia), starting from the Late Imperial Age up to the second half of the 19th century. A study phase has been started on these hypogean architectures, to understand the causes and the related degradation phenomena triggered by the action of invasion water, in the karst subsoil. The research was founded: a) on the acquisition of environmental characteristics monitored with assisted diagnostic systems; b) on the direct and diachronic monitoring of the presence, diffusion, persistence, extent of the degradation phenomenon and the quantification of the related material damage to the underground architectural monument; c) on the contextual reading of those typological-geometric and historical-architectural factors which, over a very wide period of time, have been able to influence the evolution, expansion, persistence and aggravation of the degradation phenomena themselves; d) on the reading of the extent of the damage manifested in the form of structural collapse of the rocky banks. The aim of microclimatic monitoring was to evaluate the thermohygrometric imbalances that occur naturally within the space under study, in order to define the threshold values of T° C and environmental RH which allow the optimal conservation of historic surfaces in Opera. These values are of particular importance for the drafting of guidelines on the management and maintenance of architectures excavated in calcarenitic rocky banks, in order to prevent forms of degradation that can occur due to lack or excess of ventilation or inadequate use.

**Keywords:** Restoration, Environmental monitoring, Hypogeous