

Vpliv morskega okolja na propadanje malte v arheoloških ostalinah: primer otoka Cresa

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Vabljeni predavanje

Povzetek Hrvaška obala skriva številne arheološke ostaline, med njimi tudi sledi nekdanjih naselbin. Fizični dokazi o času gradnje stavb iz rimskega obdobja in pozneje so pogosto ohranjeni v gradbeni malti, ki jo je mogoče datirati z metodo radiokarbonskega datiranja. Vendar pa uporaba te metode vključuje številne omejitve in izzive, med katerimi je tudi vpliv mediteranskega podnebja. Malta v teh območjih propada zaradi mehanskih poškodb, ki jih povzročajo močni vetrovi, visoka vlaga, izpostavljenost vodi ter prisotnost morske soli. Kristalizacija morske soli povzroča dodatno vpijanje vode in poškodbe strukture malte, hkrati pa spodbuja rekristalizacijo kalcita. V okviru dvoletnega hrvaško-avstrijskega projekta so ti procesi podrobneje raziskani na arheoloških ostalinah na otoku Cresu, predvsem v in okoli Osorja. Trenutni rezultati projekta kažejo, da vpliv morske soli na datiranje zgodovinskih malt ni tako izrazit, kot je bilo sprva pričakovano. Namesto tega ima znatnejši vpliv uporaba morskih sedimentov pri pripravi malte.

Ključne besede Osor, zgodovinska malta, radiokarbonsko datiranje, vpliv morske soli, morski sedimenti

The Influence of the Marine Environment on Mortar Degradation in Archaeological Remains: A Case Study of the Island of Cres

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Invited Lecture

Abstract The Croatian coastline contains a variety of archaeological remains, including traces of past settlements. Physical evidence for the construction dates of buildings from Roman times onwards can be found in their stonework mortars, which can be dated using the radiocarbon method. However, the application of radiocarbon dating faces various constraints and challenges, including the effects of the Mediterranean climate. Mortar in these regions is degraded by factors such as mechanical damage from strong winds, high humidity, exposure to water, and the presence of sea salt. Sea salt crystallises, drawing in more water and damaging the mortar structure, while also promoting calcite recrystallisation. A two-year Croatian-Austrian project was conducted to investigate this process in more detail, focusing on archaeological remains on the island of Cres, primarily in and around Osor. The current project results show that the influence of sea salt on the dating of historical mortars is less significant than expected. Rather, the use of marine sediments in mortar production has a considerable impact on their ^{14}C dating.

Keywords Osor, historical mortar, radiocarbon dating, influence of sea salt, marine sediments