

Sedimentological and geochemical features of anthropogenic travertine

The model of the roman hot spring of Jebel Oust, Tunisia

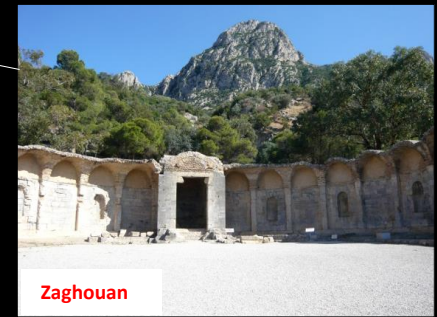
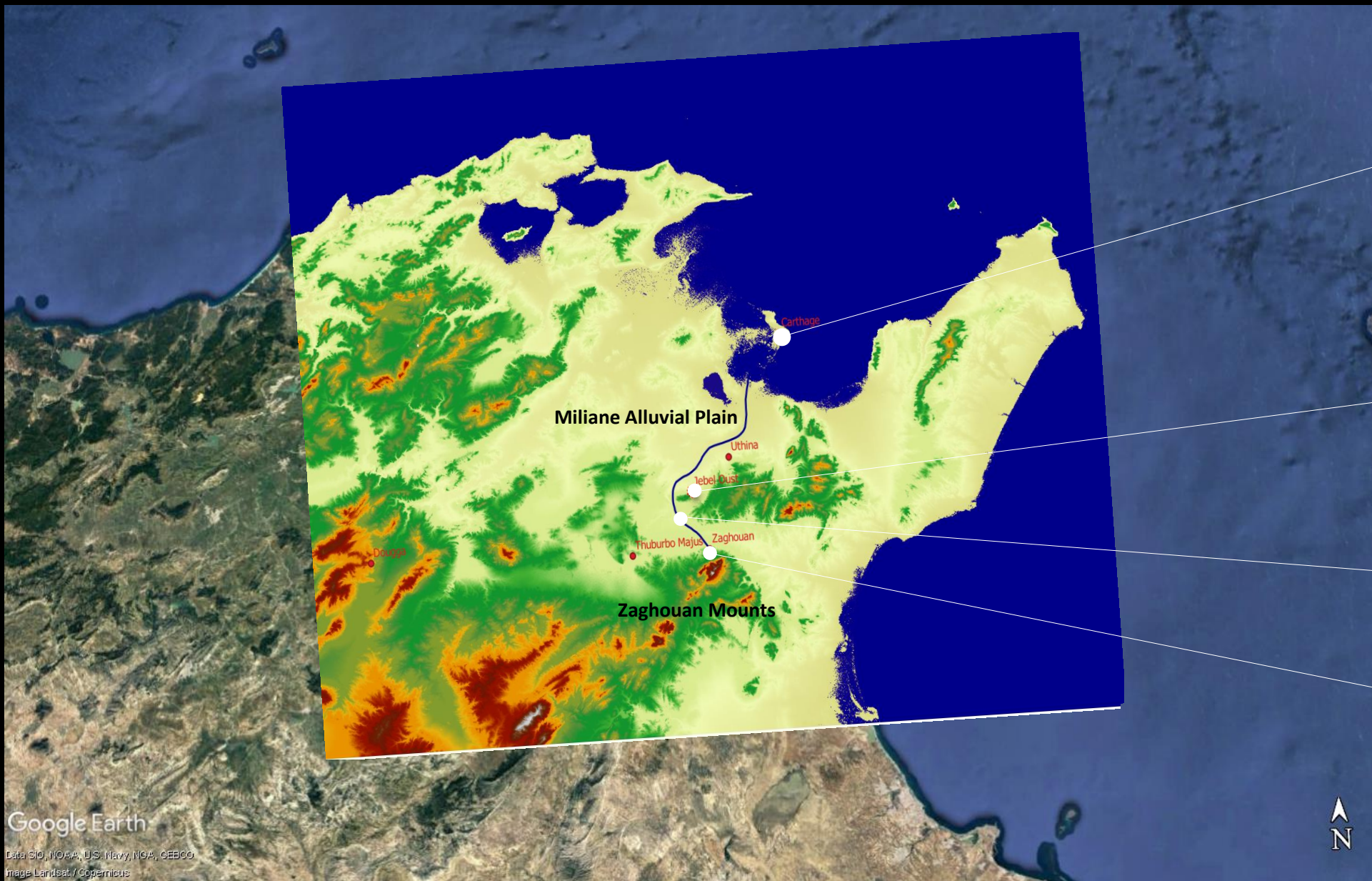
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UMR CNRS 7041 ArScAn

« Environmental Archaeology » Team Research







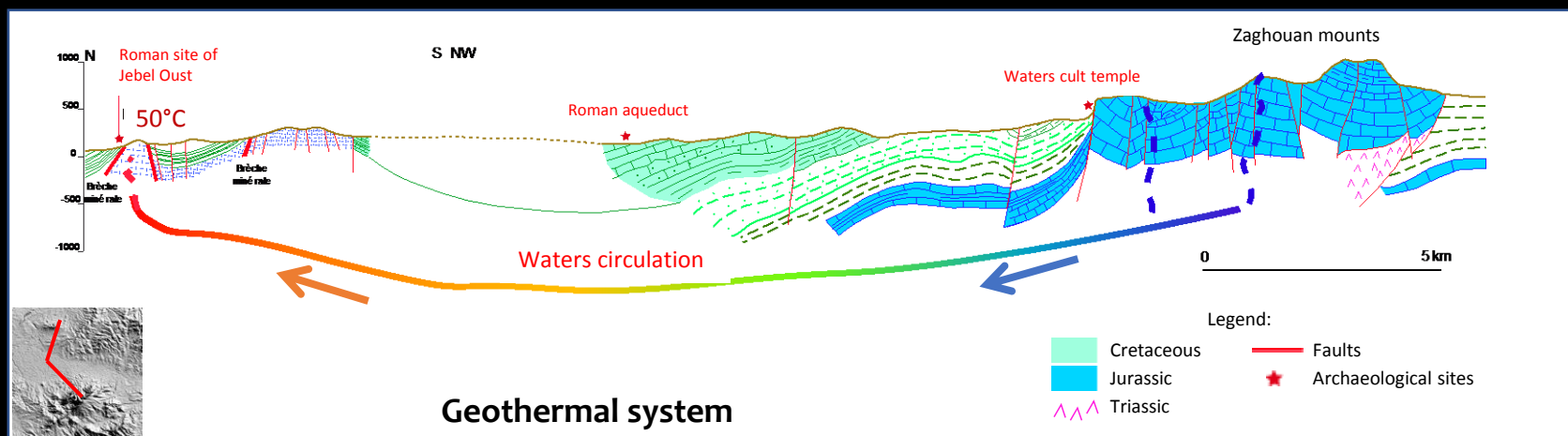
Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus

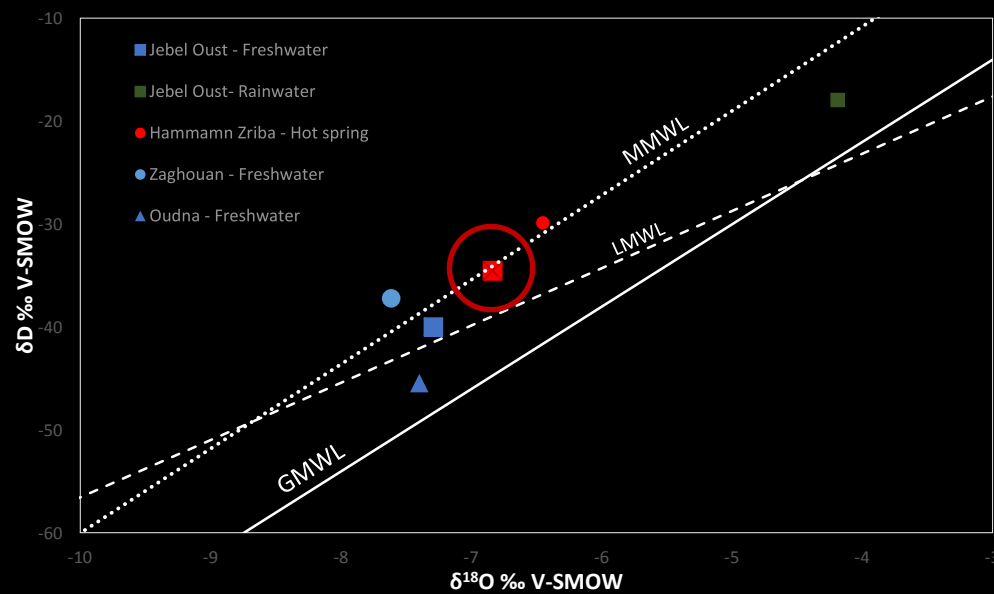




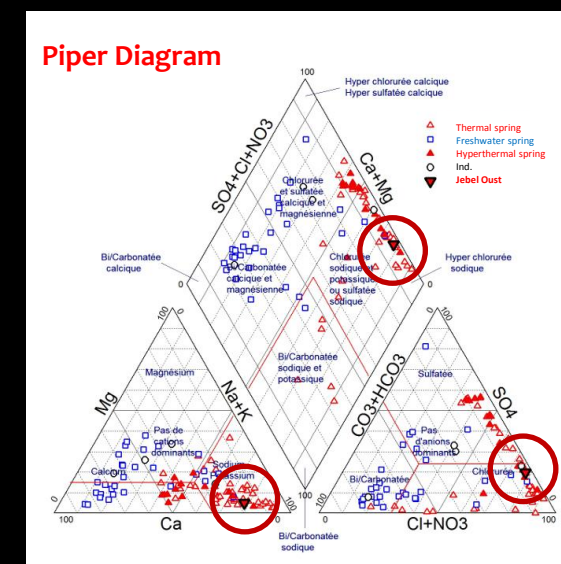
The hot spring and travertine-depositing waters



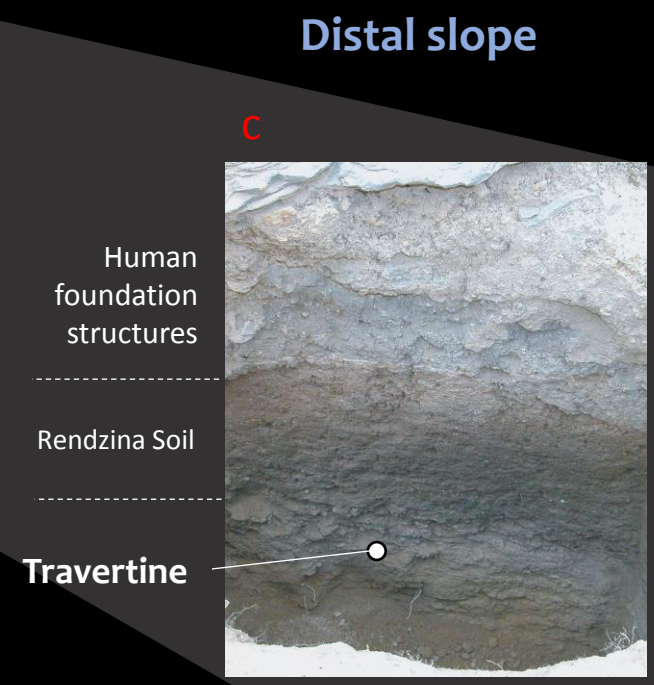
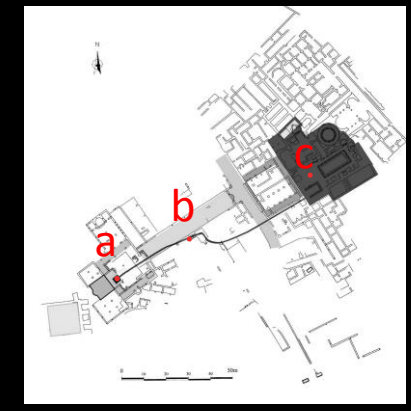
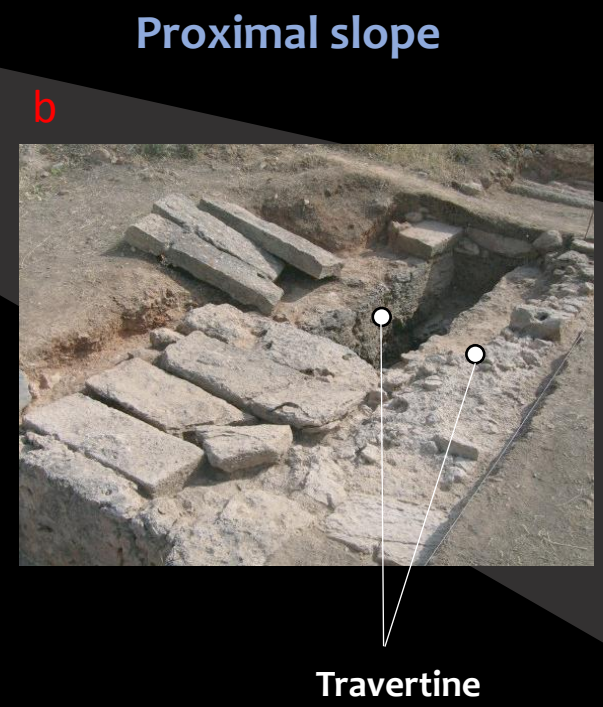
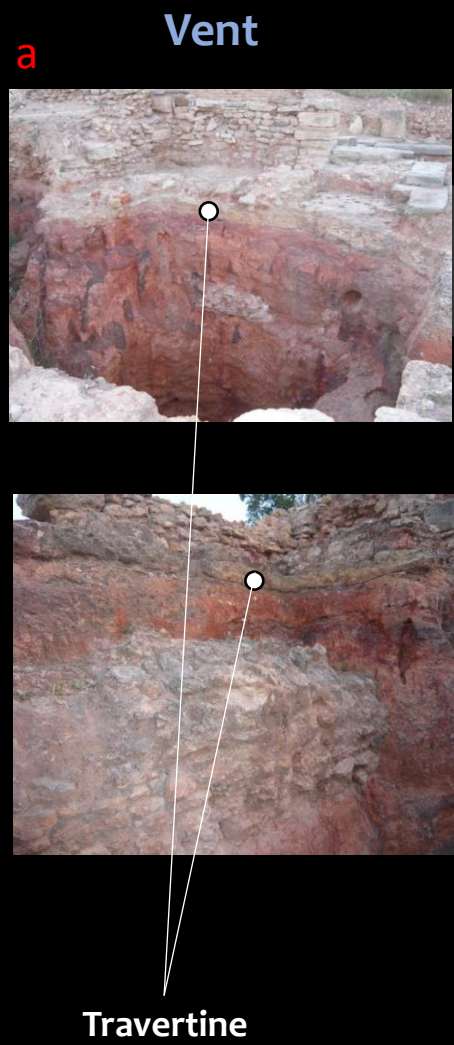
Waters isotopic (O/D) composition



Mineral waters chemistry of Tunisia



Travertine-depositing waters



« Natural » travertine, under the Roman structures



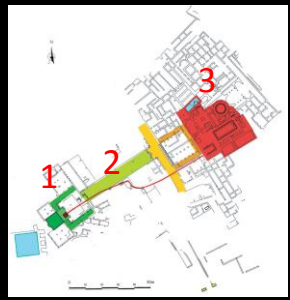
Gentle slope depositional model

0
Vent

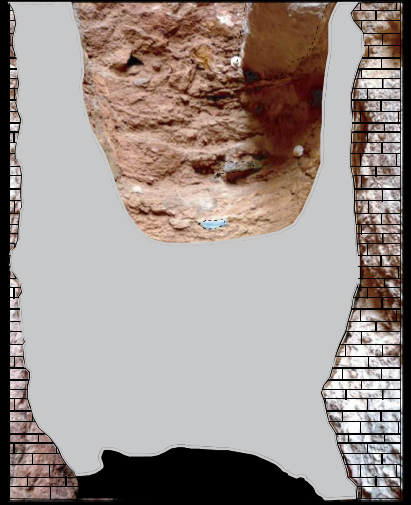
35
Proximal slope

90 m
Distal slope



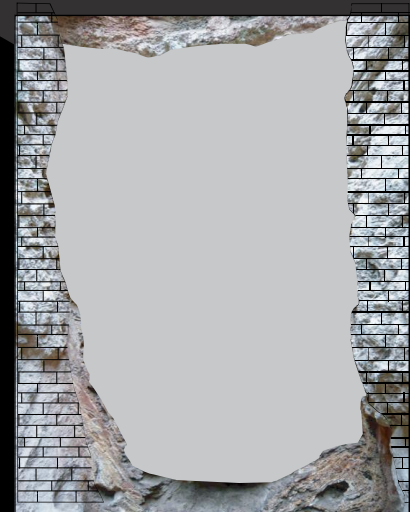


Vent - Sanctuary



« U » Travertine

Proximal slope - Aqueduct



Puff-pastry travertine

Distal slope - Baths



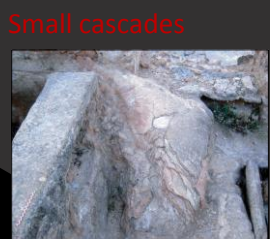
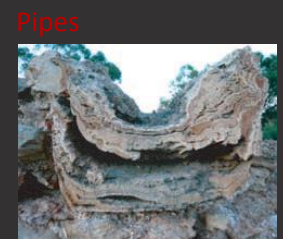
Laminated facies



Tanks

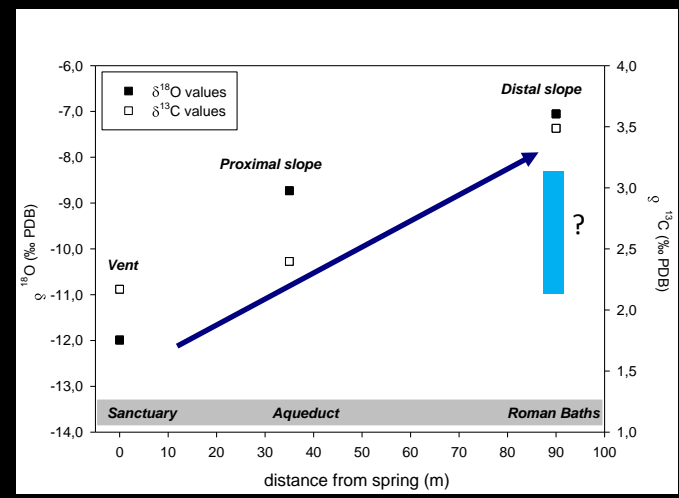
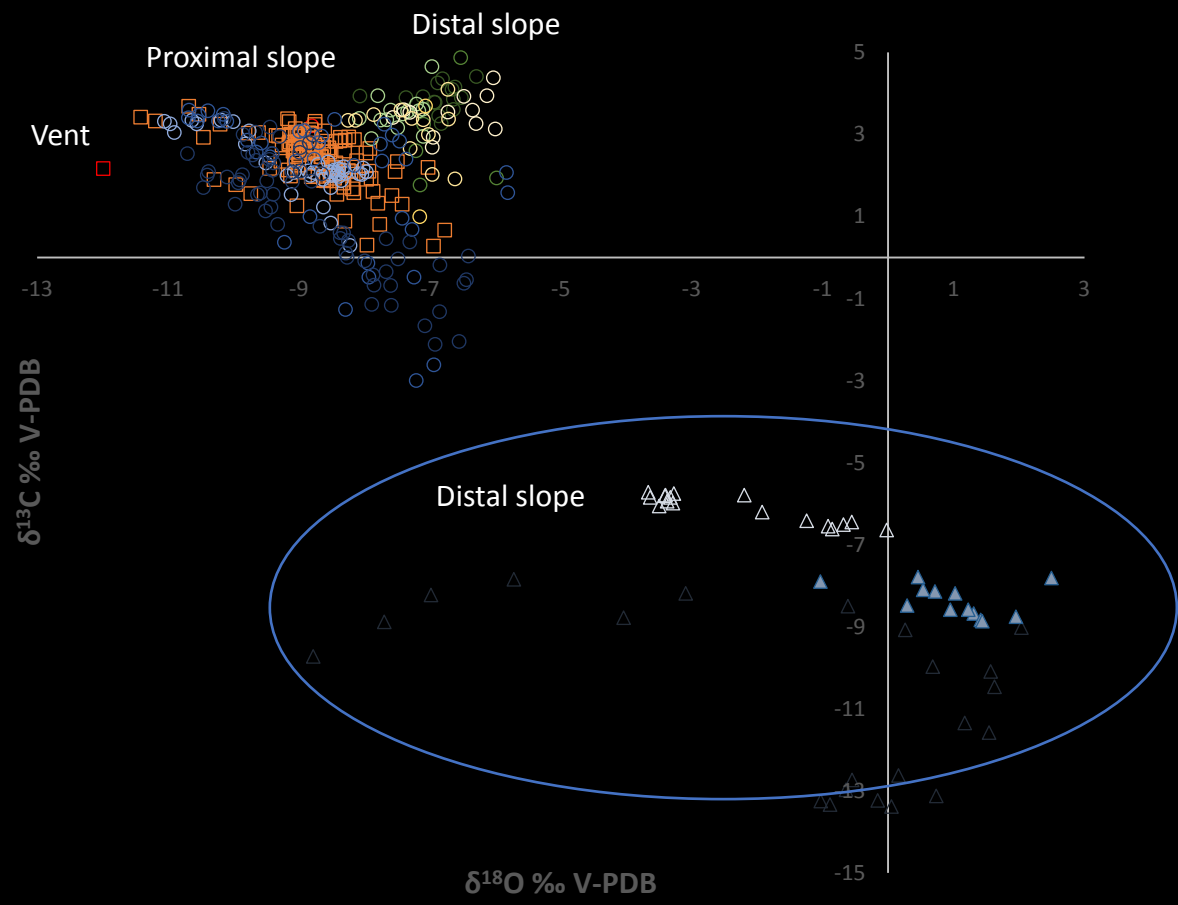


Spongy facies



Crystalline crust

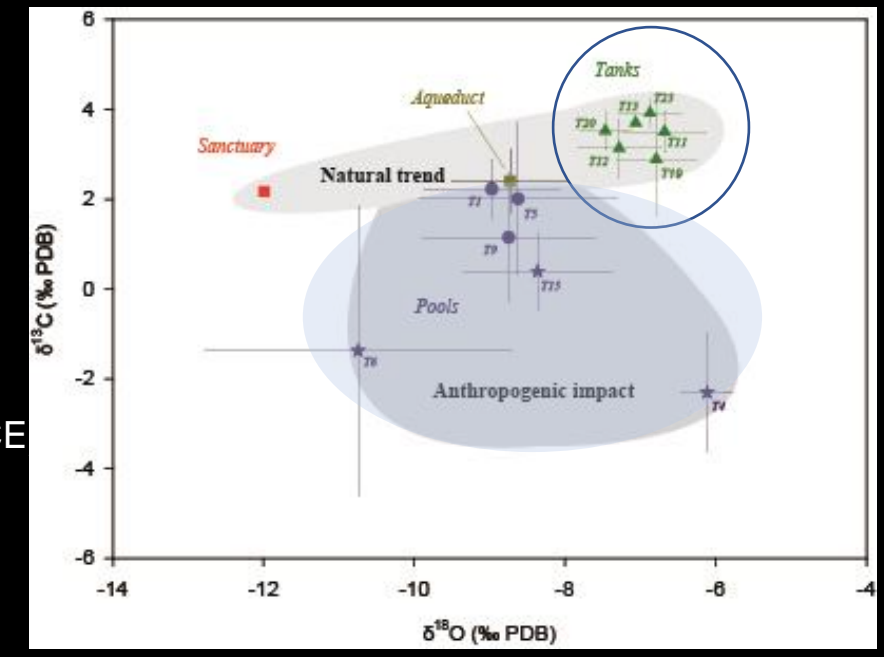
The « anthropogenic » travertine



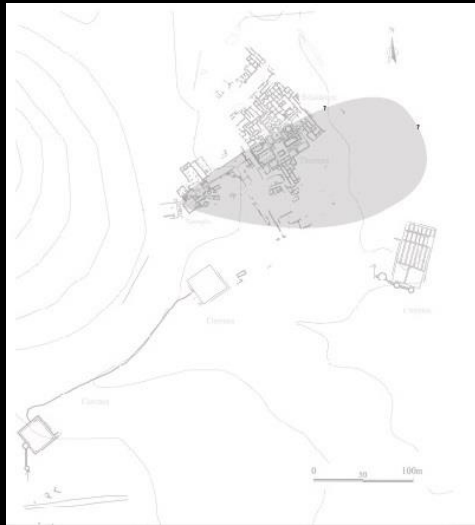
Waters management
 Seneca (Nero period – 1st c. CE)
Natural Questions, III, 24.

Mixing hot waters
 and freshwater

Cooling down hot waters



« Natural » Travertine

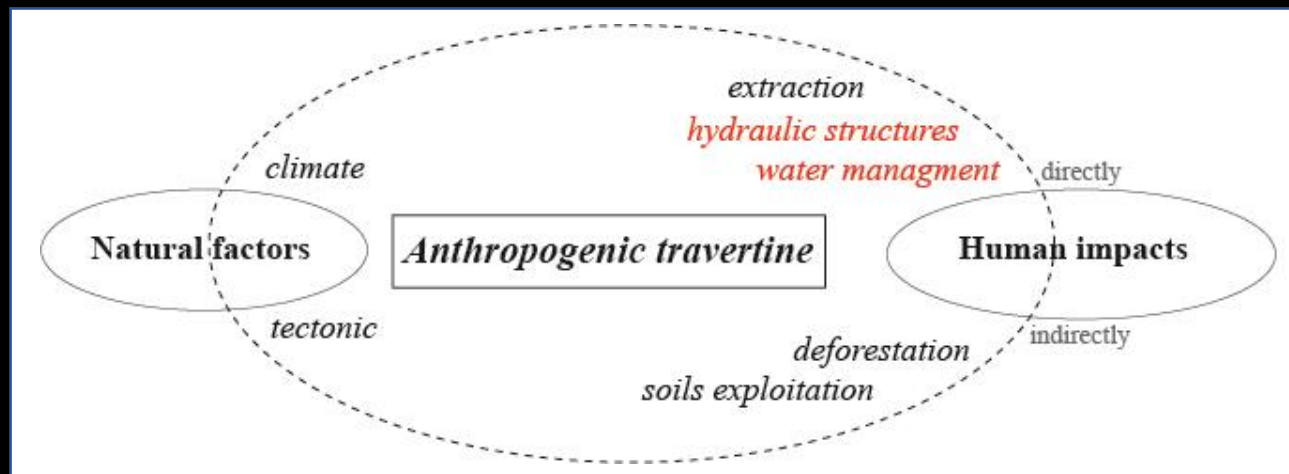


Human activities



Control on Travertine morphology
Diversity of Travertine facies
Complex geochemical signals

Anthropogenic Travertine



To complete the model...



Isère (France)



Rolampont (France)



Latium (Italy)

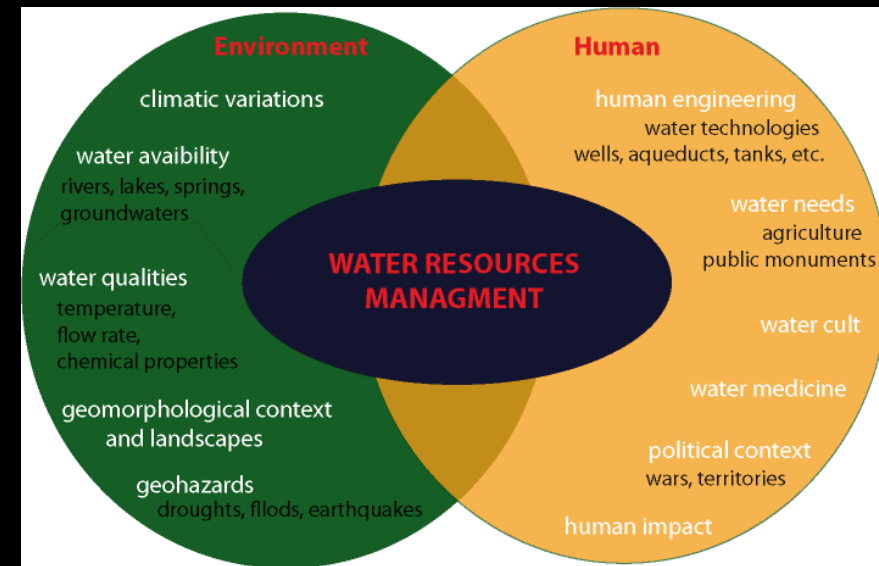


Pamukkale (Turkey)



58. La Ficoncella. Resti dell'insediamento romano e in particolare della vasca termale.

Ficoncella (Italy)



<http://juliencurie.com>

Thank you