

Cave Vermiculations, Life Hotspots for Studies of Hypogean Microbiology



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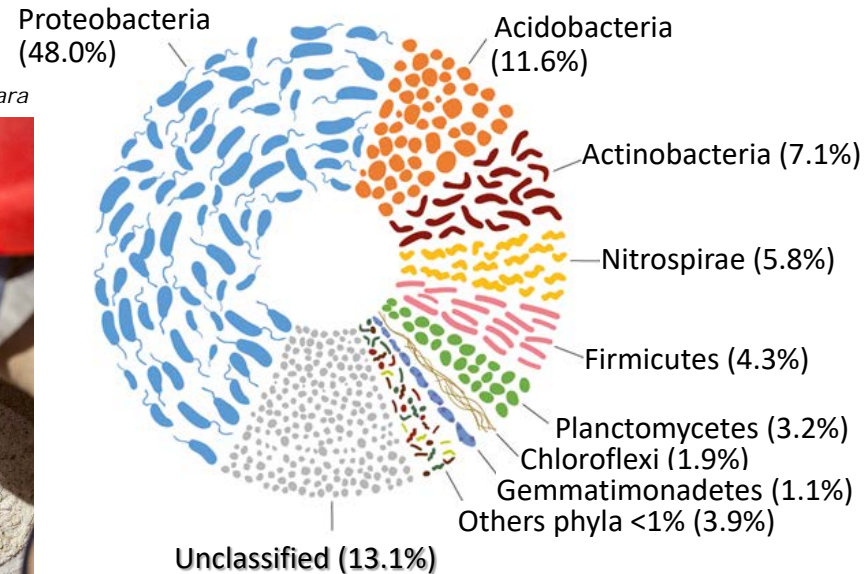
AIM OF THE STUDY

Shedding light on the geochemical and microbiological characteristics of vermiculations from Pertosa-Auletta Cave (Campania, southern Italy)

GEOCHEMICAL FEATURES (XRD, elemental analysis)

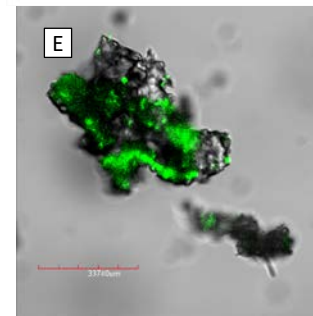
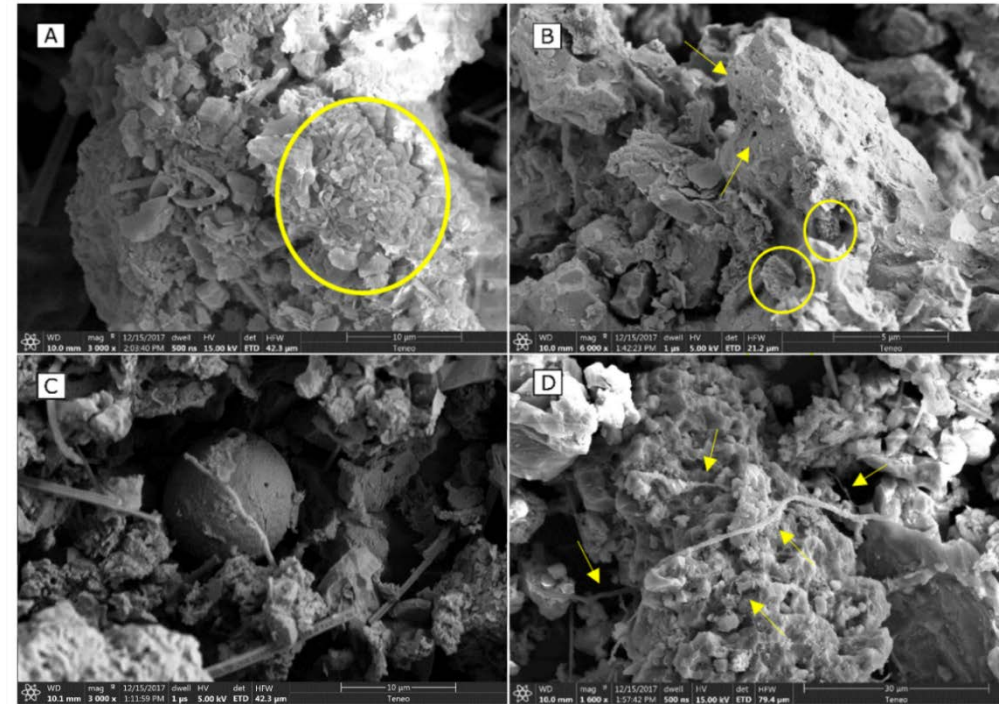
They are mainly composed by calcite, with a low amount of quartz and clay minerals, exhibiting a wide variation in Al, Ba, Ca, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, S, Si, Sr, Ti, V, and Zn concentrations

MICROBIOLOGICAL FEATURES (NGS)



Ph Orlando Lacarbonara

MICROSCOPICAL FEATURES (FE-SEM, CLSM)



- A. Clusters of cells
- B. Etching voids (arrows) and spores (rings)
- C. Calcite rods and spheres
- D. Organic filaments
- E. CLSM image

Cave microbiota contributes to the genesis of vermiculations, through constructive and destructive processes

Vermiculations are still unexplored peculiar sedimentary structures, occurring on the walls of natural or artificial caves. Very recent researches supported their biological origin

