Middle Eocene seagrass assemblage from Apennine carbonate platforms (Italy)

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The aim of this work is to characterise a Middle Eocene (Lutetian - Bartonian) seagrass deposits that crop out in the Apennine carbonate platforms (Italy). Two stratigraphic sections located respectively in the Latium-Abruzzi (Monte Porchio, Cassino Plain, south-eastern Latium) and in the Apulian carbonate platform (S. Cesarea, Salento), were measured and sampled to document the sedimentological characteristic and the faunistic assemblages.

The micropaleontological and sedimentological investigations were carried out on thin sections of the consolidated bioclastic grainstones.

The main components were point counted (up to 500 points for each thin section) using the software JMicroVision 1.2.7. The collected data were statistically processed by the software SPSS 22.0; a factor analysis and a hierarchical cluster analysis (Ward method with squared Euclidean distance) of the main components were obtained and discussed.

The investigated assemblages are dominated by porcellaneous foraminifera such as *Idalina*, *Alveolina*, *Orbitolites* and small miliolids (*Spiroloculina*, *Quinqueloculina*, *Triloculina*) and abundant permanently-attached acervulinids taxa, represented especially by saddle-shaped *Gypsina*, associated with articulated coralline red algae and green algae *Halimeda*, *Fabiania*, rotaliids and textulariids as well as nummulitids are subordinated. The samples were assigned to Lutetian (SBZ13-16) according to the occurrence of *Assilina* *cf.* *maior*, *Nummulites* *cf.* *lehneri*, *Alveolina* elliptica, *Idalina berthelini*, *Orbitolites complanatus*, *Slovenites decastroi* and *Medocia blayensis*. At Santa Cesarea reticulate nummulites occur in association with *Alveolina* spp. and *Halikyardia minima* marking the lower Bartonian (SBZ17).

This biotic assemblages suggest that the depositional environment is consistent with a vegetated shallow inner ramp in tropical to subtropical water withinand oligotrophic conditions.