

6 Post - Drainage system adjustment in response to the opening of the Rieti intermontane basin

Excursion Leaders: Giandomenico Fubelli, Marta Della Seta, Gabriele Amato

Proposed Excursion Date: 21 July 2023

Draft Itinerary: Fara Sabina - Frassinoro (RI) - (RI)Rieti (RI)

Minimum number of participants: 10

Maximum number of participants: 30

Definitive cost per head: € 100

Proposer Contact Details:

Giandomenico Fubelli

Institution and Address: University of Turin - Department of Earth Sciences, Via Verdi 8 - 10124 Torino (Italy)

Phone: 0116705213 Email: giandomenico.fubelli@unito.it

Description

The Fara in Sabina Mts. are made of deformed Mesozoic limestone and marls in transitional facies between the Abruzzi platform and the Umbria- Marche pelagic basin. Along their slope, at elevation ranging between 260 and 277 m a.s.l. several holes of lithodomus mark the highest part of the Gelasian in age marine transgressive phase. In particular, the uppermost paleoshorelines (UPS) are related to marine and transitional deposits belonging to the Chiani-Tevere Formation.

Few kilometres north of Fara in Sabina Mts, deposits made of sands, marls, clays and some lignitiferous horizons are heteropic with the Chiani-Tevere Fm, very close to its uppermost paleo-depositional surface. This surface defines the alluvial plain of the PaleoFarfa River, correlates the sea level markers of the UPS from the west at 270 m a.s.l.. and is recognizable as far as in the Rieti area.

This ancient top gelasian surface (made of fluvial to alluvial fan deposits) is deeply incised by the Middle Pleistocene river erosion in the Frassinoro area. Contextually, in the Rieti area is abruptly interrupted by E-W normal fault that border southward and northward the Rieti basin.

Before the formation of the Rieti Plain, subsidence was concentrated more to the south, as suggested by the spatial distribution of the Gelasian alluvial body thickness.