

Mesozoic palaeogeography and tectono-stratigraphic features of the northern Amerini Mts. (Central Apennines, Italy): new constraints on their Jurassic and Cretaceous evolution

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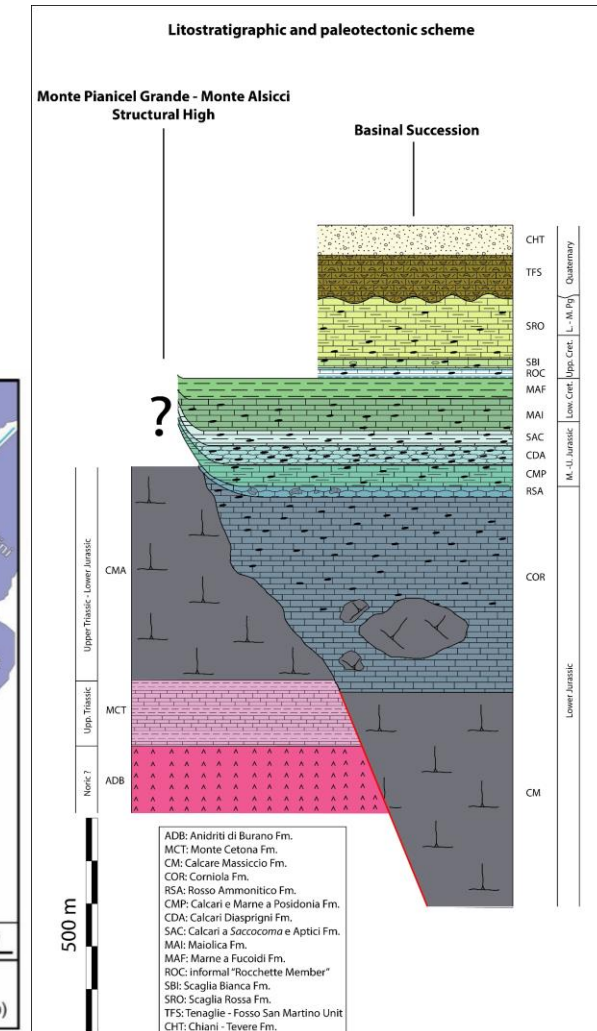
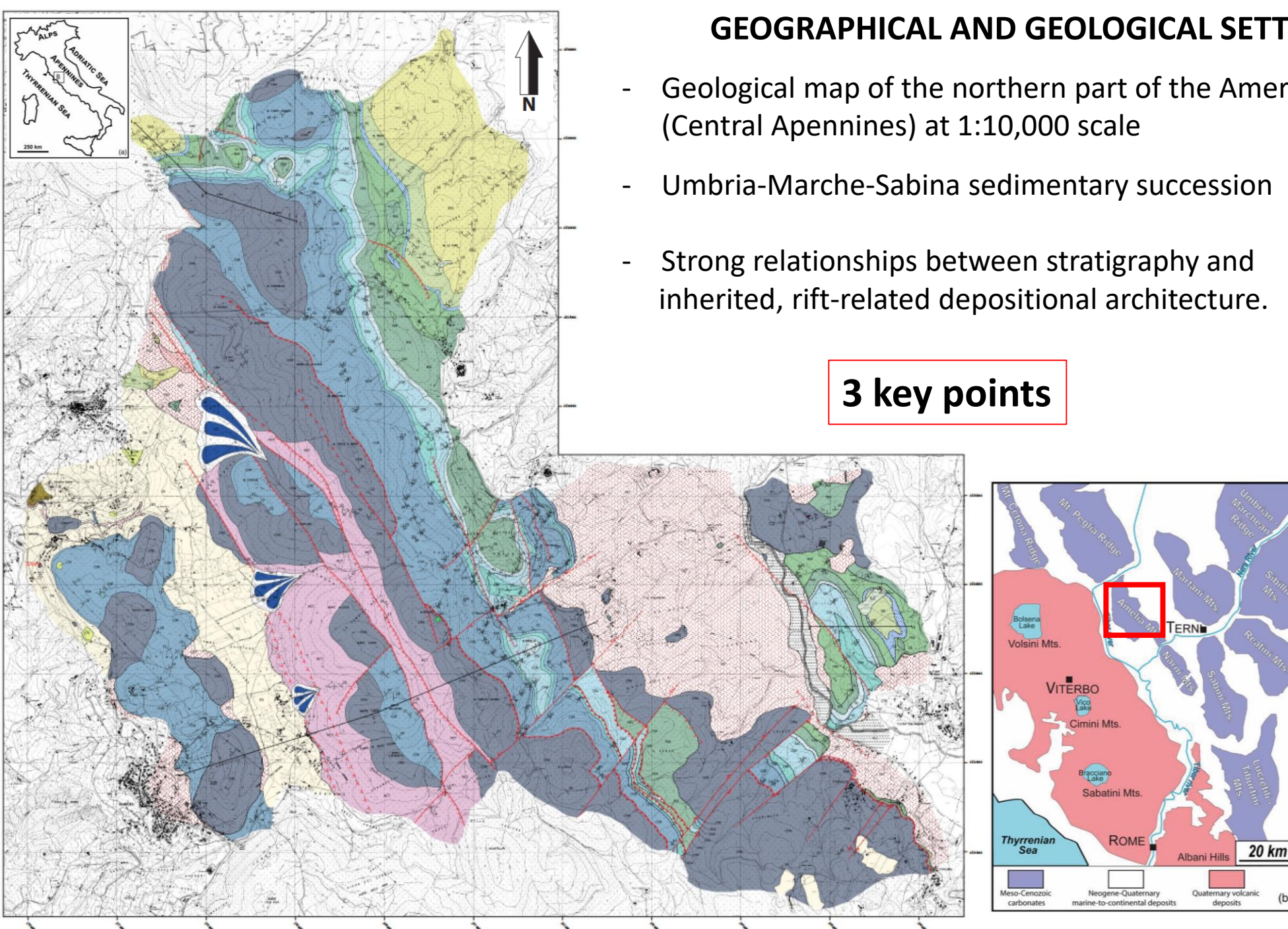
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GEOGRAPHICAL AND GEOLOGICAL SETTING

- Geological map of the northern part of the Amerini Mts (Central Apennines) at 1:10,000 scale
- Umbria-Marche-Sabina sedimentary succession
- Strong relationships between stratigraphy and inherited, rift-related depositional architecture.

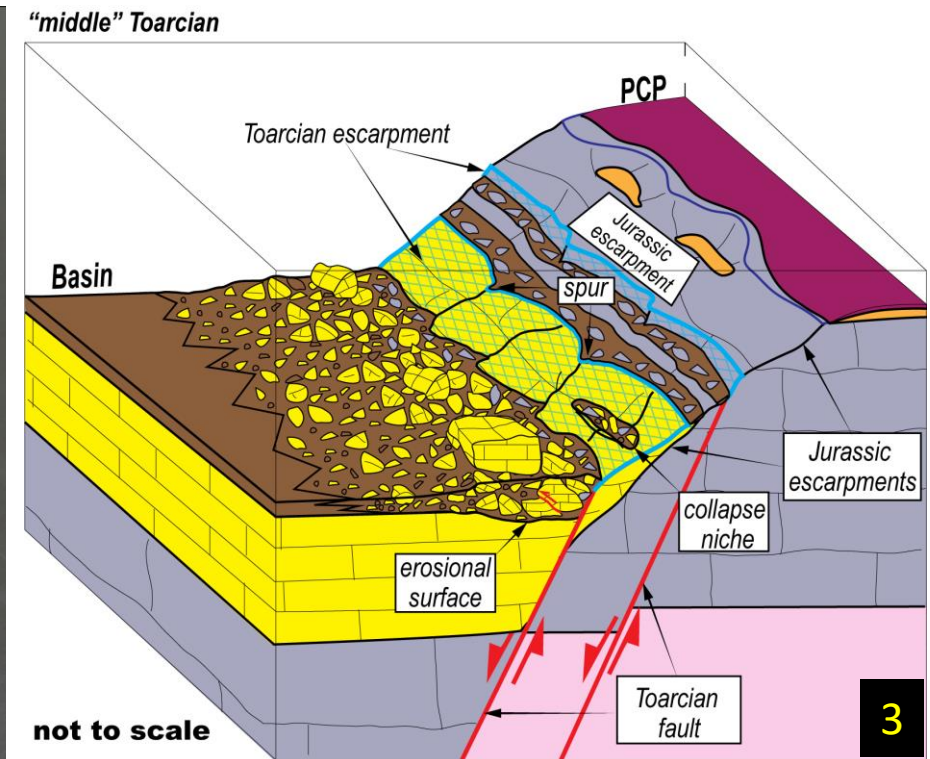
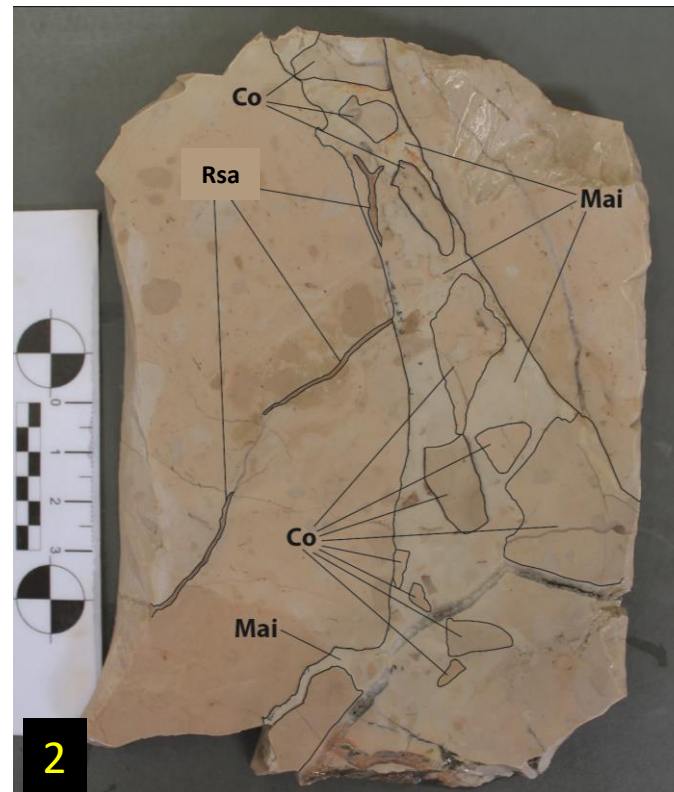
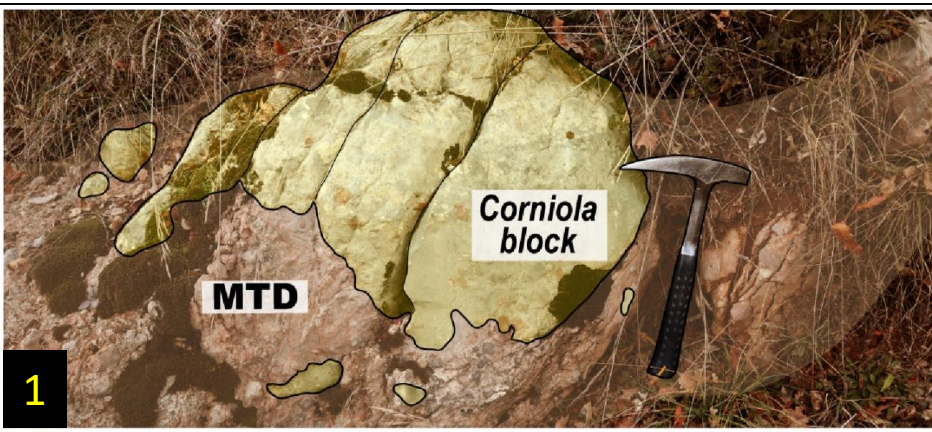
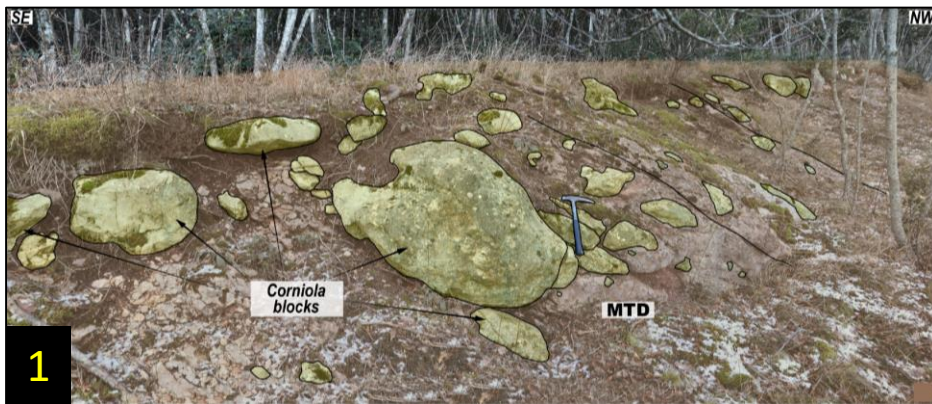
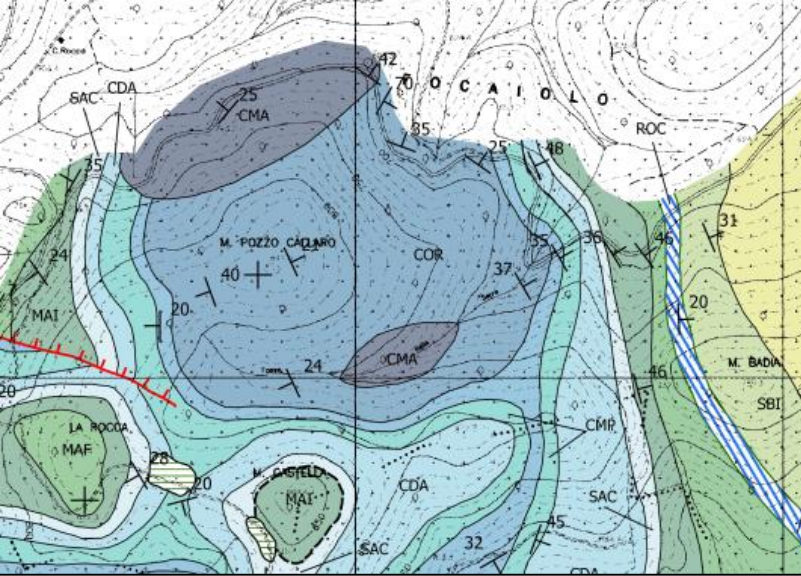
3 key points



Point 2

Evidence of Toarcian post-rift normal faulting

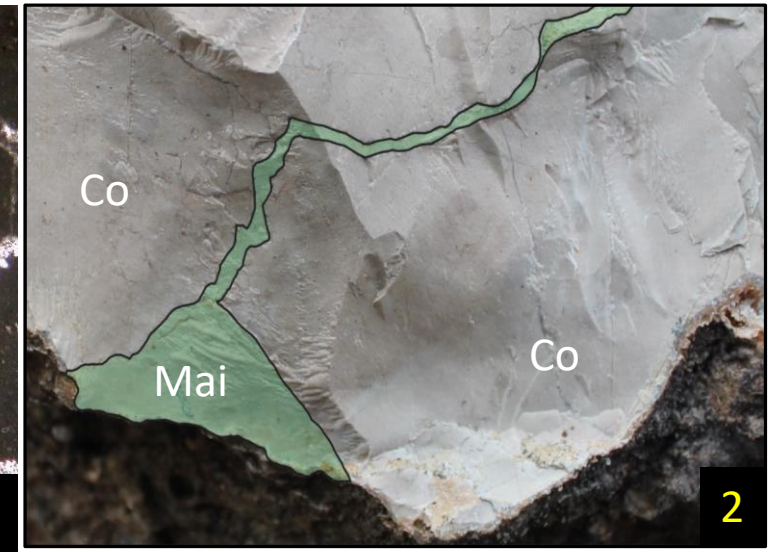
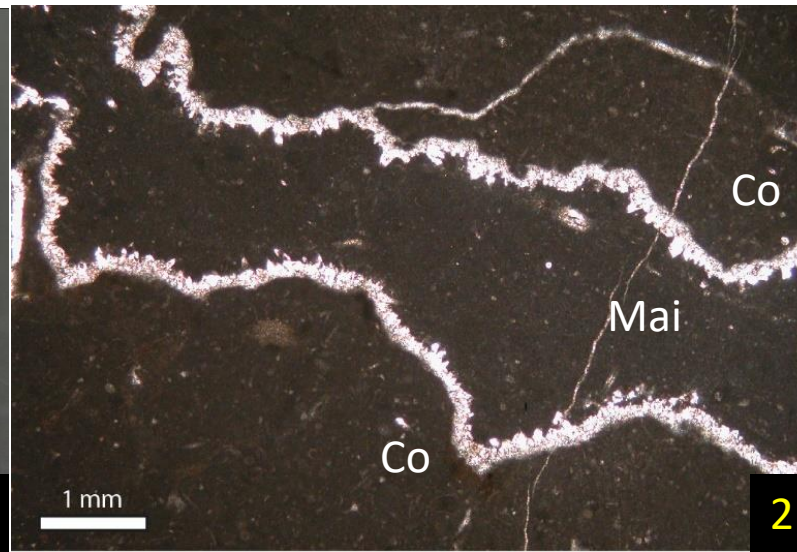
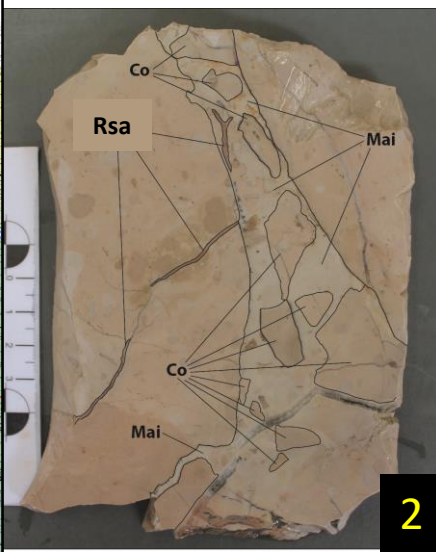
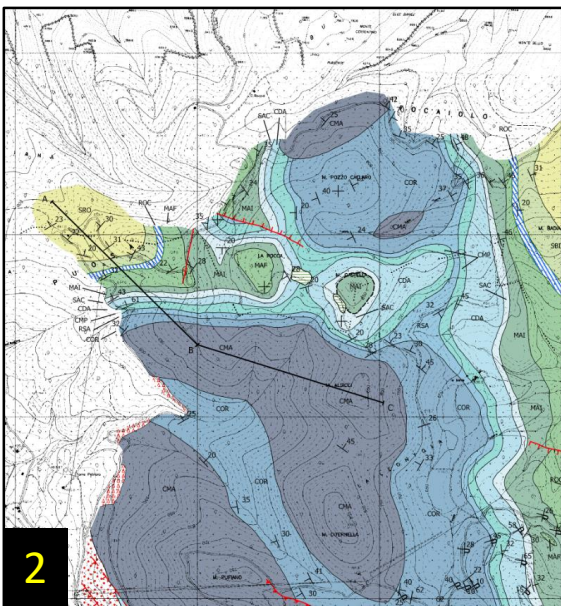
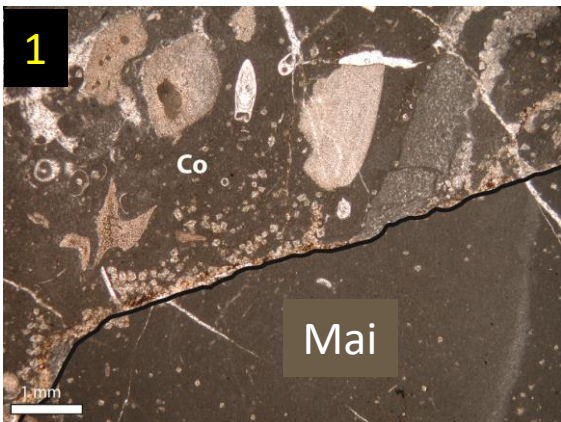
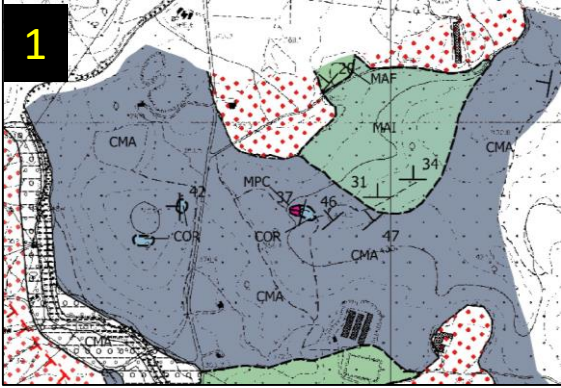
1. Mass Transport Deposits (MTDs) in the Toarcian marls of Rosso Ammonico, represented by debris flow/breccias deposits bearing plastically-deformed clasts (from sand to boulder in size) of Pliensbachian Corniola-type facies.
2. Neptunian dykes filled with Rosso Ammonitico facies cutting Pliensbachian Corniola deposits, and cutted themselves by (younger) Maiolica-made neptunian dykes. Figure legend: Co= Corniola; Rsa= Rosso Ammonitico; Mai= Maiolica.
3. Schematic, middle Toarcian, palaeotectonic reconstruction of the study area. Highlighted is the reactivation of Hettanian palaeofaults, and the formation of a new, Toarcian, palaeoescarpment along which Pliensbachian pelagites were exposed and which sourced the Corniola-made blocks of MTDs. Figure legend : pink= Monte Cetona fm.; light blue= Calcare Massiccio; yellow= Corniola; brown= Rosso Ammonitico; orange and purple= Bugarone Group.



Point 3

Evidence of late Early Cretaceous synsedimentary tectonics

1. Neptunian dyke filled with Maiolica-type facies cut across condensed-like crinoid-rich facies (Corniola) unconformably resting on the Calcare Massiccio. Figure legend: Co= Corniola; Rsa= Rosso Ammonitico; Mai= Maiolica.
2. Maiolica-made neptunian dykes cross-cutting the basinal Corniola formation-rank unit.
3. Slump fold at the top of Maiolica.



Structural features

1. Field view of the Frattuccia thrust, which juxtaposes the Calcare Massiccio (CM – hangingwall) on a overturned pelagic succession at the footwall, made of Maiolica (Ma) and Marne a Fucoidi (Maf) lithostratigraphic units.
2. Structural cutting relationship between (older, red in map) compressive and (younger, white in map) extensional faults.
3. Field view of a Plio-Quaternary normal fault, related to the formation of the Paglia-Tiber Graben (west of the study area).

