

Field campaign 5– Upper Eocene–Recent unconformity (February 22-24, 2021)

On the fifth field campaign, both GEO and PALEO teams were present. The PALEO team collected additional green-grayish clay material from an emersion within late Albian carbonates, and the GEO team sampled the footwall of loess-palaeosol sequence and terra rossa on two locations. Greenish-gray clay material was collected in Kanfanar quarry, while on cape Savudrija and Kanfanar quarry sampling of loess-palaeosol sequence and terra rossa footwall was carried out. Detailed sampling of footwall was conducted (every 10 cm) along the chosen geological columns. Out of collected rock samples, thin sections will be fabricated, together with $\delta^{18}\text{O}$, $\delta^{13}\text{C}$ analysis in selected samples. Several larger limestone samples are going to be dissolved for analysis of insoluble residue. Greenish-gray clay material was collected for additional analysis, such as SEM, micromorphological study, geochemistry, together with heavy and light mineral fraction analysis.

Another location was also planned for pedo-sedimentary complex footwall sampling, where pedo-sedimentary complex has been previously sampled as a part of this project (location Rovinj, Field campaign 2). It had to be left out, because of the utilization of this site as a lake. This made the footwall unreachable, due to flooding with several meters of water. As a substitute, two large samples: one of early and one of late diagenetic dolomite were collected from nearby Fantazija quarry, for analysis of their insoluble residue. Sampling of a similar sequence on another location, also comprised of Berriasian cyclic alternations of early and late diagenetic dolomites, will be revised in the future.



Figure 1. Flooded previously sampled outcrop of pedo-sedimentary complex near Rovinj

Kanfanan quarry

Fieldwork on this site comprised from the sampling of the terra rossa footwall and collection of greenish-gray clays from the emersion within late Albian carbonates. Most of the samples comprised mudstone and bioclastic wackestones, with sporadic occurrences of black-pebble and emersion breccias. Sampling was carried out every 10 cm, amounting in total to 2.2 m of geological column. On some samples burrowing traces were observed. Several kg of greenish-gray clays was sampled for the aforementioned analysis.



Figure 2. **upper left** – upper Eocene to recent unconformity marked with the occurrence of terra rossa, and an emersion within late Albian carbonates marked with the occurrence of greenish-gray material; **upper right** – emersion breccia, **lower left** – traces of burrowing, **lower right** – black-pebble breccias.

Cape Savudrija

Fieldwork was entirely comprised of sampling the loess-palaeosol sequence (footwall, which encompasses Cenomanian limestones with frequent occurrences of rudist and chondrodonta coquinas and coquinites. Worth noting is an interesting observation of herringbone cross-bedding. Sampling was conducted every 10-50 cm, amounting in total to 7.3 m of the geological column.



Figure 3. **Upper left** – loess-palaeosol sequence outcrop , **upper right** – footwall of loess-palaeosol sequence, comprised from Cenomanian limestones, **lower left** – rudist coquina, **lower right** – chondrodonta coquina.