

Field campaign 10 – the fourth unconformity (26th of February, 2024)

The decision to introduce a new objective of the WIANLab project, "Objective O9 - Preparation of an application for the protection of the terra rossa soil profile in the category of natural monument - geological monument and participation in the creation of a professional basis for the preparation of the study" results from the research within the project published in the paper by Durn et al. (2023): "A tropical soil (Lixisol) identified in the northernmost part of the Mediterranean (Istria, Croatia)". The valuable knowledge gained from this project forms the basis for the initiation of the procedure for the protection of the Terra Rossa profile in the category of natural monument - geological monument. The aim of these field investigations was to determine a high quality site where a pedological pit should be excavated that has the specified soil type.

Terra rossa soil located in a meadow above the Koreniki vineyard

It was determined that the ideal location for the pedological pit was in the meadow above the Koreniki vineyard in the village of Koreniki, in the immediate vicinity of the site under investigation. Probes were taken at nine positions covering a surface of 16m² and it was found that the thickness of the terra rossa was at least two meters over the entire surface of the probe, which is ideal for the representation of a pedological pit (Figure 1).



Figure 1. Photographs of meadow above the Koreniki vineyard. Top left – meadow above the Koreniki vineyard, top right – probing the depth of terra rossa soil, bottom left – the thickness of the terra rossa soil was at least two meters, bottom right – position of the probes taken.

The color of the subsurface soil samples in the wet state is 2.5YR 3/3 (dark reddish brown), and in the dry state 2.5YR 4/4 (reddish brown). This satisfies the condition that the qualifier Rhodic, which indicates very red soil (hue redder than 5YR and value <4 in wet condition and max one unit higher in dry condition) is based on soil color (Figure 2).



Figure 2. Photographs of soil taken at the meadow above the Koreniki vineyard. Left – soil micromonolith, right – soil micromonolith and Munsell color chart.