

Field campaign 1 – Cretaceous/Palaeogene boundary on the Ubac Peninsula (January 23rd, 2026)

The first field campaign aimed at the preliminary assessment of one of the selected localities in Istria, the K/Pg boundary on the Ubac peninsula, near Koromačno. The fieldwork started from the town of Koromačno, following the coastline towards the Ubac peninsula. Along the coastline, there are several outcrops of the K/Pg boundary, represented by different paleokarst features, such as breccias, reddened bedrock, in situ and reworked speleothems, and different palaeosols.

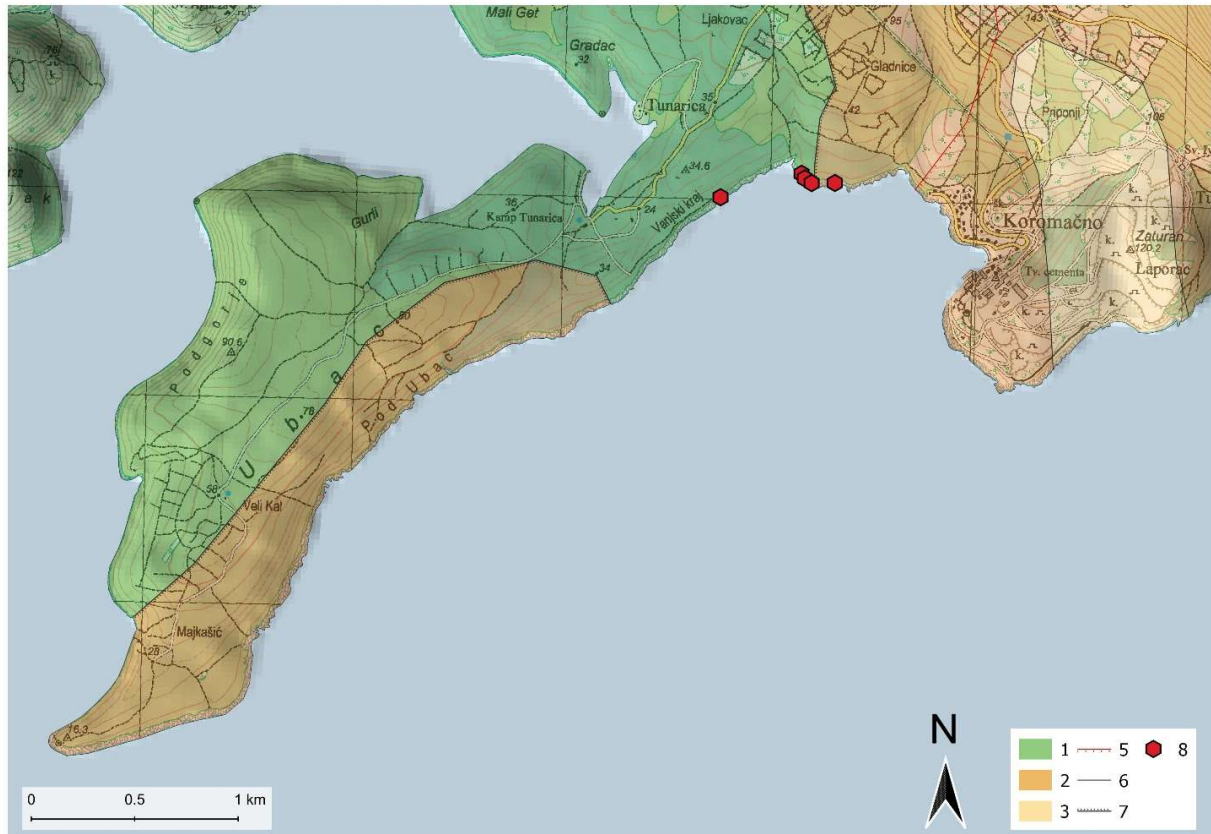


Figure 1. Geological and topographical map of the Ubac peninsula and the area of Koromačno, with marked sampling sites. 1 – Upper Cretaceous limestones, 2 – Liburnian deposits and Foraminiferal limestones, 3 – Flysch, 5 – reverse faults, 6 – normal geological boundary, 7 – transgressive boundary, 8 – sampling site

After the assessment of the boundary along the coastline, the reconnaissance stopped at the large outcrop of the K/Pg boundary, represented by a breccia, spanning tens of metres laterally and up to several metres in thickness. The breccia is composed of up to metre-sized karstified and reddened bedrock fragments, embedded within a laminated matrix composed from an alternation of sand-sized, pisoid-rich layers and silty layers. The breccia is overlain with several metres of Liburnian beds, rich in freshwater gastropods and brownish to blackish in colour due to the presence of organic matter. Towards the top of the cover, black pebble breccias occur, composed of reworked fragments of Liburnian beds. The section ends with white bioclastic limestone. Several samples of

aforementioned materials were collected along the coastline, while the majority of the samples was collected on the last outcrop with the large breccia occurrences overlain with Liburnian beds.

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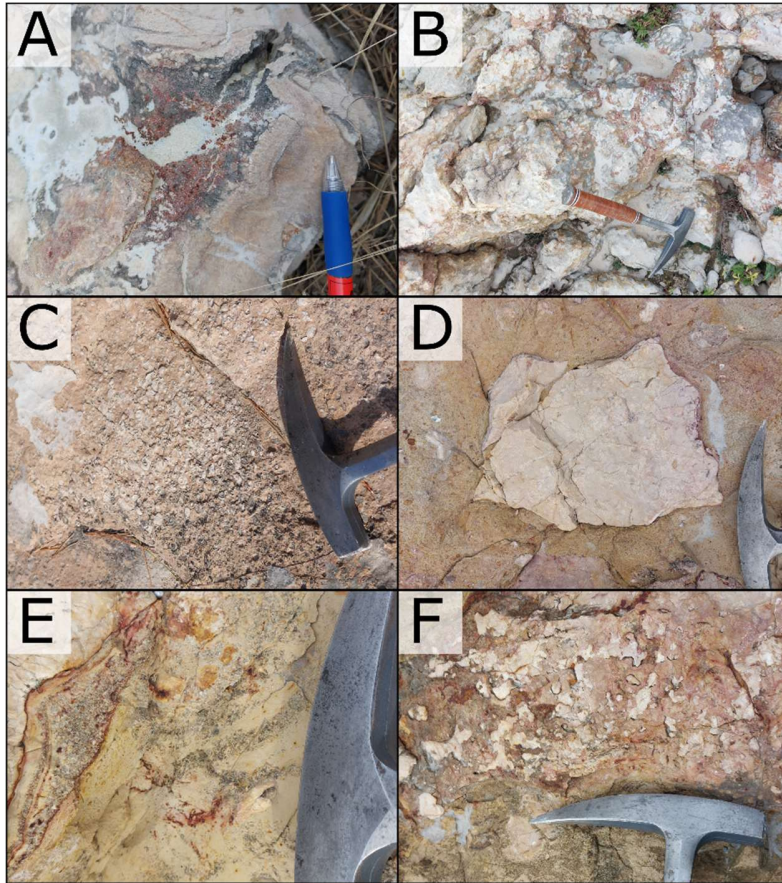


Figure 2. Photographs of various phenomena and materials marking the Cretaceous-Paleogene boundary. A – redeposited palaeosol in an karstified channel lined with speleothemes, B – redeposited palaeosol in a network of karstified channels, C – Liburnian deposits rich in gastropod fossils, D – redeposited bedrock fragment within the matrix of the collapse breccia, E – alternation of coarse and finer-grained layers in the matrix of the breccia, F – spongy karstification of the bedrock

Table 1. *list of collected samples*

KOR1	palaeosol+speleothemes
KOR2	fine-grained breccia
KOR3	palaeosol+breccia, cave calcite
KOR4	calcite rafts
KOR5	cover-top
KOR6	cover-BPB
KOR7	cover-Liburnia
KOR8	cover-Liburnia
KOR9	cover-Liburnia
KOR10	breccia + matrix
KOR11	bedrock