

Submerged karst landscapes of the Eastern Adriatic

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The Croatian coastal region is a part of Maritime Dinaric Alps which coincides with the Adriatic Carbonate Platform (AdCP). Some of the coastal karst depressions/basins (Dalmatian coast) developed into larger lakes (Fig.1.). Sediment core records show a tight correlation between sea level rise and lake formation during early Holocene. Terrestrial sequences in the Croatian coastal karst regions are often incomplete due to erosion or nondeposition. Therefore, accumulation of lake and marine sediments offer complete and well-dated archives spanning throughout most of the Holocene. Since a part of the karstified AdCP is drowned and its palaeo-dolines, depressions of variable size, as indicated by seismic data, contain up to 400 m of well stratified sediments (Kvarnerić bay, N. Adriatic) allowing insight to earlier periods of the Quaternary. Generally larger karst depressions lie between the islands at present day water depths from -40 m to -90 m. These karst basins contain archives of climate change and have experienced repeated relative sea-level cycles during the Quaternary. Coring and geophysical data of a 40m thick sediment sequence indicate at least two glacial (lake sediments) and three interglacial (marine) cycles are present in Lošinjski kanal due to submerged sills at -50 m. Most of the present day lakes along eastern Adriatic coast formed during the early Holocene (Bokanjačko blato, Vransko jezero near Biograd, Veliko jezero- Mljet). Vransko jezero on the Island of Cres survived from the Pleistocene as probably did lake Crniševo (Bačina lakes). The LGM lakes of Lošinjski kanal and Valun bay were flooded at onset of the Holocene, while the Pleistocene lake in Pirovac bay was flooded by the sea 8 ky cal BP and Veliko jezero on Mljet Island at 3 ky cal BP.

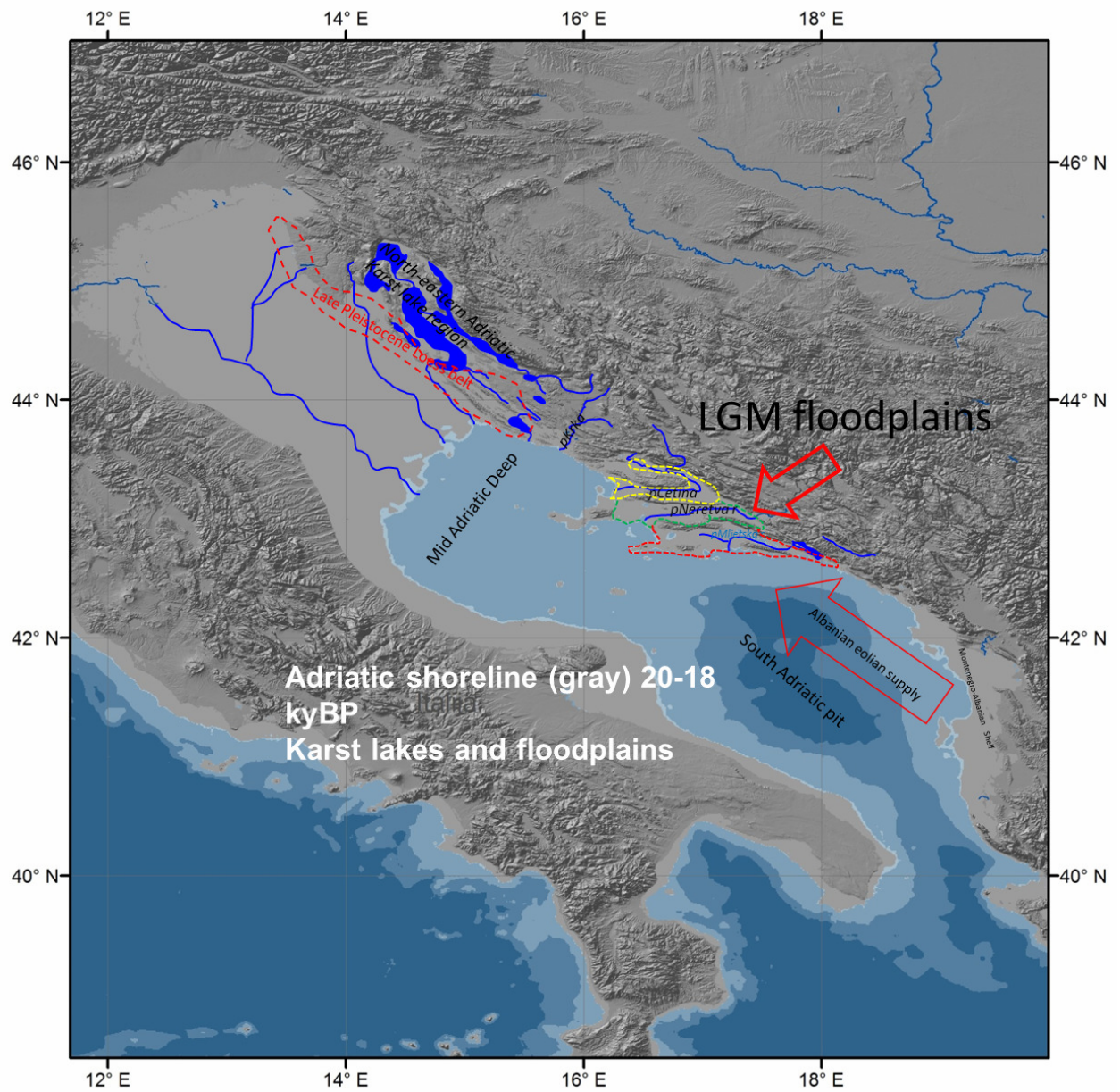


Figure 1. Paleolandscapes of the eastern Adriatic coast during the LGM (20-18 ka BP).