



Comparison of Different Sample Intervals on the Location of "Stillfried B"

R. Peticzka and **D. Riegler**

University of Vienna, Austria (robert.peticzka@univie.ac.at / Phone: +43-1-4277-48670)

The reinvestigation of the loess-palaeosoil sequence in the eastern parts of Lower Austria at hand took place due to the famous position of the so-called section "Stillfried B" in the field of quaternary palaeosoil research. Starting with a detailed take-up of the geographic position by using tachymetric options the profile was located in its exact position for the first time. During the field survey standard parameters like carbonate concentration, soil colour according to Munsell and optical verification, as well as the measurement of magnetic susceptibility were applied at first. After that undisturbed samples by an arithmetic interval of 10 cm were taken. These samples were analysed using traditional parameters (e.g. carbonates, clay content or mineralogical analyses) as well as laboratory methods that are especially used in the modern soil science (e.g. total cation exchange capacity or aggregate stability). In conclusion it can be stated that, although the signals were blurred in the whole profile, there is a slight pedogenetic horizon which can be compared to the known "Stillfried B". Furthermore a second region was detected within a pedogenetic horizon, but due to the taken sample interval it was not possible to come to an unambiguous conclusion of the paleopedogenetic situation [Peticzka et al., 2007]. Therefore we took a monolithic bloc (195 cm height) of the region of palaeosoil "Stillfried B" and the new palaeosoil above and reduced the sample interval in the laboratory to 1 cm. Due to the enormous number of samples the investigations were reduced to the parameters carbonate content and texture. Although we only used these two parameters the conclusion was more detailed and clear. We differentiate between two separated palaeosoils in the array of Stillfried B. We conclude that the reduced sample interval might lead to new insights. Therefore the two sample methods and their analytical capabilities should be compared and discussed.

References

- [Peticzka et al., 2007] Peticzka, R., Riegler, D. and Ottner, F., 2007: New results from profil "Stillfried B". In: Neugebauer, Ch. (Ed.), New Aspects concerning the Middle and Eastern European Upper Paleolithic - methods, chronology, technology and subsistence. Mitt. Prähist. Komm. ÖAW, in Press.