



Detailed sampling from a “one-piece-monolithic-bloc” of the Paleosoil Stillfried B

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The paleosoils in the location of Stillfried in the eastern parts of Lower Austria near the river “March” are well known in quaternary research. Their famous position is mostly due to the research done by Julius Fink in the middle of the last century (Fink 1954), although there was some research done in the last decades (Frechen et al. 2003). The reinvestigation of the loess-paloesol sequence of "Stillfried B" started with a detailed survey of the topographic position with tachymetric instruments. Due to that the situation of “Stillfried B” was fixed in its exact and absolute position for the first time. The taking of soil samples in the field of paleopedology, is often determined by a narrow cost-benefit calculation. Normally the decision about the number of samples taken from a profile is based on expert knowledge. Thereby an expert classifies the profile using for example easy determinable parameters like the colour, the texture, the carbonate before the sampling. The main aim is to cover the whole profile through a number of samples taken at locations with changing parameters within the profile. Afterwards the grain size spectrum and different other parameters will be determined in the lab and additionally used as representation for the profile. Obviously expert knowledge determines to a high degree the description of the profile and the classes found within. Another, independent, way will be to sample a profile at equidistant locations and to use the measured parameters for the classification. The authors have chosen to bring a “one-piece-monolithic-bloc” into laboratory. The samples have been taken at an interval of 1 centimetre or multiples. The standard parameters like grain size, carbonate content, magnetic susceptibility, iron-oxides and colour have been measured. The questions we would like to answer are: How can the two different approaches be

reconciled? Is there an optimal distance for the sampling?

FINK, J. (1954): Die fossilen Böden im österreichischen Löss. Quartär 6. S. 85-108.

FRECHEN, M., OCHES, E. A. & K. E. KOHFELD (2003): Loess in Europe - mass accumulation rates during the Last Glacial Period. Quatern Sci. Rev. 22. S 1835-1857.