



Pedological evidences of extreme cold and drought periods in the late Eemian and early Last Glacial in loess sections from North-West Europe to Central Siberia

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Comprehensive prospections of paleosoil complexes have been performed on large loess sections in Belgium (mainly the Kesselt, Rocourt, Remicourt sites), Germany (Koblenz-Metternich, Wallertheim sites), Czechia (Dolni Vestonice), Central Russia (mainly the Zheleznogorsk site), and Central Siberia (Kurtak) This contribution focuses to soils, developed in the late Eemian and in the early Late Glacial, displaying a set of field characteristics indicative for very severe drought and for extremely cold environmental conditions. The micromorphological study, further sustained by adequate soil analytical data, confirms these particular climatic events that certainly had a strong impact on the ecosystem's evolution. It is possible to match the paleo-drought evolution with the present-day soilscape dynamics in some arid to semi-arid parts of the world. However, for the abrupt cooling, with the possibility of permafrost development in areas such as Belgium and Western Germany, we do not know of any comparable environmental evolution in recent times, unless to go back to the Younger Dryas event. Exact dating of the paleosoil sequences in these loess deposits is difficult and a tentative correlation is made with the data available from archaeological and geological investigations.