

High-resolution palynological study of Misten Holocene peat bog (Hautes-Fagnes, Belgium)

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In most parts of the Hautes-Fagnes plateau, peatlands began to form about 8500 years ago, in early Holocene times. Thickness of peat sediments reaches more than 7 m in the plateau of Misten. Pollen analysis will be used to infer past climate conditions and human activities.

This project aims at a high-resolution study of pollens and spores (one sample per 1.5 centimeter) conserved in Belarus drilling cores extracted from the lower part of Misten peat bog (270 to 753,50 cm). The objectives of this research include a detailed reconstruction of climate history, habitat and floral composition and landscape evolution during the Holocene on the Hautes-Fagnes plateau.

A total of 110 samples have been treated; 122 microscope slides were mounted and pollen grains were counted; pollen identification was conducted on the basis of the works of Ciampolini et al. (1981), Erdtman (1954), Fægri (1975), Kremp (1968), McAndrews et al. (1973), Moore et al. (1978), Pokrovskaja (1958) and Reille (1992).

Pollen diagrams were drawn based on 1 sample per 1.5 cm from 270 to 319,50 cm and 1 sample per 6 cm from 319,5 to 753,50 cm depth. Pollen diagrams were compared and briefly correlated with that of Persch (1950) made in a peat section located a few hundred meters from the drilling site; four periods including Atlantic a, Atlantic b, Subboreal and Subatlantic were identified. In the "Atlantic a" period, *Ulmus* pollen percentage exceeds that *Tilia* pollen whereas in the "Atlantic b", *Tilia* exceeds *Ulmus*. The Subatlantic chronozone is the period of typical increase in the abundance *Fagus* pollen that peaks in the first part of the period when *Fagus* pollen percentage remarkably exceeds that of *Quercus* and *Corylus*.

Taking advantages of the close proximity of the new drilling site and the peat section studied by Persch (1950), we intend to study much more detailed correlation between them.

References

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