

## Historical landscape of Šumava in the light of palaeobotanic and antique maps' evidence

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### Introduction

Studying the landscape is an interdisciplinary task requiring various data sources which are often not easy to integrate. Research concerning the changes of vegetation could serve as a good example - the intention is to integrate outputs of palaeobotany and historical geography, namely the pollen profiles and antique maps, in order to receive a picture of the past vegetation in the studied area (the Šumava Mts. in Southern Bohemia). The first conclusions are given here.

### Method

For the confrontation the pollen profiles analysed by Svobodová (2004) and the 2<sup>nd</sup> Military Survey maps dated to the middle of 19<sup>th</sup> Century were chosen; on the military map the area within 1 km circle around the profile was vectorised in the GIS environment and converted into land-cover categories. From the pollen diagrams the values of arboreal pollen (AP) percentage and number of taxons were drawn and together with the land-cover values pictured in the graph.

The expected correlations (AP-forest area, number of taxons-length of boundaries) were observed at all sites except Malá niva (the reason is being checked); correlation wood taxons-forest area was not found; we take it that many of the trees may belong to the wetland class (possibly *Betula nana* and *Pinus rotundata*).

Beside this „quantitative“ analysis also a rather „qualitative“ approach was used as well - the parallels between taxons and antique sources were discussed (e.g. *Melampyrum* sp. and its relation to the fire management of the area).

### Conclusion

The problems were mostly caused by uncertainties when handling the pollen diagram, namely the precise dating and a question of spatial representativeness of the pollen data. We considered that the research would inevitably involve these questions and aim at statistical analyses of parallels between pollen data and historical landscape. The first steps will be based on precision and amplification of both data types; the pollen data will be converted from the point to the polygon through interpolation and modelling and the correlations will be searched for.

The aim is now to enhance the information gained from antique map by the pollen evidence, i.e. plant species found on the site and the pollen data by a spatial context, whereas the method can be tested on the antique maps.

### References

- Svobodová, H. (2004): Migrace klimaxových dřevin na Šumavu v holocénu (Migration of klimax wood species to Šumava during the Holocene). *Bulletin Slovenskej botanickej spoločnosti*, Bratislava, Suppl. 11, pp. 207-216