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POLLEN MONITORING AS A TOOL FOR INTERPRETING LANDSCAPE
AND CLIMATE CHANGES OF ROZTOCZE

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Summary

Observed in recent decades, the development of interpretive tools in pollen analysis – the basic palaeoecological method – is based on the monitoring of pollen deposition. Usually a year-round Tauber traps are used in these studies (Hicks, Hyvärinen 1986). Traps are placed in a variety of plant communities, which are well recognized in terms of phytosociology. Examples are studies carried out in the Guciów village in the Roztocze region within the Pollen Monitoring Programme PMP (www.pollentrapping.org). Developed data series of pollen collected by this method from the area of Roztocze has 13 years and is used to palaeoecologic and palaeoclimatic interpretation of pollen diagrams representing the interglacial warmings in the Quaternary. Numerical methods, among other things, are used to link the characteristics of the pollen spectrum with environmental and climatic variables and interpret the pollen deposition in the context of the composition and structure of plant communities (Pidek, Poska 2013). The development of theoretical models of pollen dispersal and deposition as well as the assessment of the landscape scale represented by the pollen spectrum (Sugita 2007) still requires new data on the annual production of pollen of different taxa. For this purpose, the volumetric method has been applied recently, allowing to determine the dynamics of individual pollen taxa during the year. The presence of stands of fir and beech in the Roztocze, which is very rare on a European scale, is an additional advantage of the monitoring series from this region.