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# Correspondence between tree pollen emissions sources and pollen content of the ambient air

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## Abstract

The article presents the findings, regarding the comparison between the pollen spectrum of the atmosphere in the area and the species composition of pollen emitting trees within the operating range of a Hirst-type volumetric air sampler. The research has revealed how local and transported pollen influence the pollen content of the atmospheric bioaerosol. Even though only a small number of birch trees grow in the area, its pollen proved to be prevalent in the pollen spectrum, while only an insignificant amount of *Quercus* pollen was detected due to the remoteness of its emission sources from the air sampler. Despite the fact that the highest number of trees in the immediate vicinity of the air sampler belong to the genus *Tilia* (linden), its pollen made up less than 1% of the pollen spectrum due to entomophily of these trees. Locations of tree pollen emission sources in the immediate vicinity of the Burkard spore and pollen trap were mapped out.

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## Ethics declarations

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No conflict of interest has been declared.

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