

Irmeli Vuorela

A REPLY TO MIRJAMI TOLONEN CONCERNING HER COMMENTS ON MY PAPER:

»Vohtenkellarinsuo, a bog in Paimio, SW Finland with a cultural origin»
Bull. Geol. Soc. Finland 55, 57—66.

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The author, Vuorela, wishes to thank Dr. Tolonen for her interest in the present investigation conducted in the area where the opponent herself started palaeoecological studies two years later, in 1982.

Dr. Tolonen's future findings on *Sphagnum* peat will probably show what particular methods she had in mind besides the careful microscope study of the stratigraphy, pollen analysis, macrofossil analysis and ash-content analysis (here replacing charcoal analysis) done for the interpretation by me.

The importance of the question asked by the opponent concerning the eventual contamination of cultural pollen indicators by the sea shore and/or pollen transported a long distance cannot be underestimated; nevertheless the author had good reasons for her brief treatment of this theoretical subject. The same applies to potential natural grass pollen in the »Cerealia» group and questions like the likelihood of contamination in the laboratory or in the field, for instance. Further, the width of the burned area around the sample site during a certain short pe-

riod could not be determined satisfactorily, not even using the C¹⁴ method.

The opponent's desire to interpret the pollen types (like Cruciferae) at a level of genera is surprising. The author could not see any reason for discussing the 40 genera of this pollen type, wondering which of them could be represented by a sporadic pollen grain in the peat sample. In the absence of macrofossil evidence it is safest to work with the pollen type that is usually included in the cultural indicators.

When a pollen type occurs in greater abundance, stratigraphical or palaeoecological data may give a hint of the species in question (*e.g.* Poaceae/Phragmites). Exaggerating the possibilities in making deductions is hardly a smaller error than underestimating them. The scientist has to find his way within certain limits and to rely on the documents available.

Still waiting for the results of Dr. Tolonen's investigations the author considers a criticism without supporting new evidence as worthless.

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