CORRESPONDENCE

Comment on "Application of OSL and ^{10}Be techniques to the establishment of deglaciation chronology in Estonia" by Anto Raukas (2004)*

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The surface exposure dating (SED) method is a recent and still improving technique with tremendous potential in the field of Quaternary geology. To date, SED has been applied successfully to the construction of deglaciation chronologies in a wide range of settings from the southern hemisphere (Ivy-Ochs et al. 1999; Shanahan & Zreda 2000; Kaplan et al. 2004) to the northern hemisphere (Gosse et al. 1995; Balco et al. 2002; Licciardi et al. 2004; Rinterknecht et al. 2004). Raukas (2004, pp. 267, 284) presents a rather pessimistic view of the SED technique when he mentions that the "method [is] highly problematic," and that "[t]wo modern dating methods (OSL and ^{10}Be) recently used could not help to improve the existing Late-glacial stratigraphical chart of Estonia and deglaciation chronology in the northern Baltic area".

There are two reasons explaining this pessimistic judgement. First, Raukas did not consult with his collaborators before publishing his paper. Discussion with specialists in SED would have helped him to understand the limitations of the method and what one can reasonably expect from it, particularly considering that a number of boulders in Estonia were sampled near the Baltic coast and had previously experienced some period of submergence beneath the Baltic Ice Lake, the Ancylus Lake, and the Litorina Sea. Second, the ^{10}Be data he presented were preliminary, and still required additional analysis for proper calculation of surface

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exposure dates, including accounting for the submergence history of boulders mentioned previously. Thus, the ^{10}Be data published in Raukas (2004) should not be used, and any interpretation should await publication of the data in their final form.

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