SGU
Sveriges geologiska undersökning
Geological Survey of Sweden

Surficial geology indicates early Holocene faulting and seismicity, central Sweden

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International Journal of Earth Sciences, v. 103, pp. 1711-1724.

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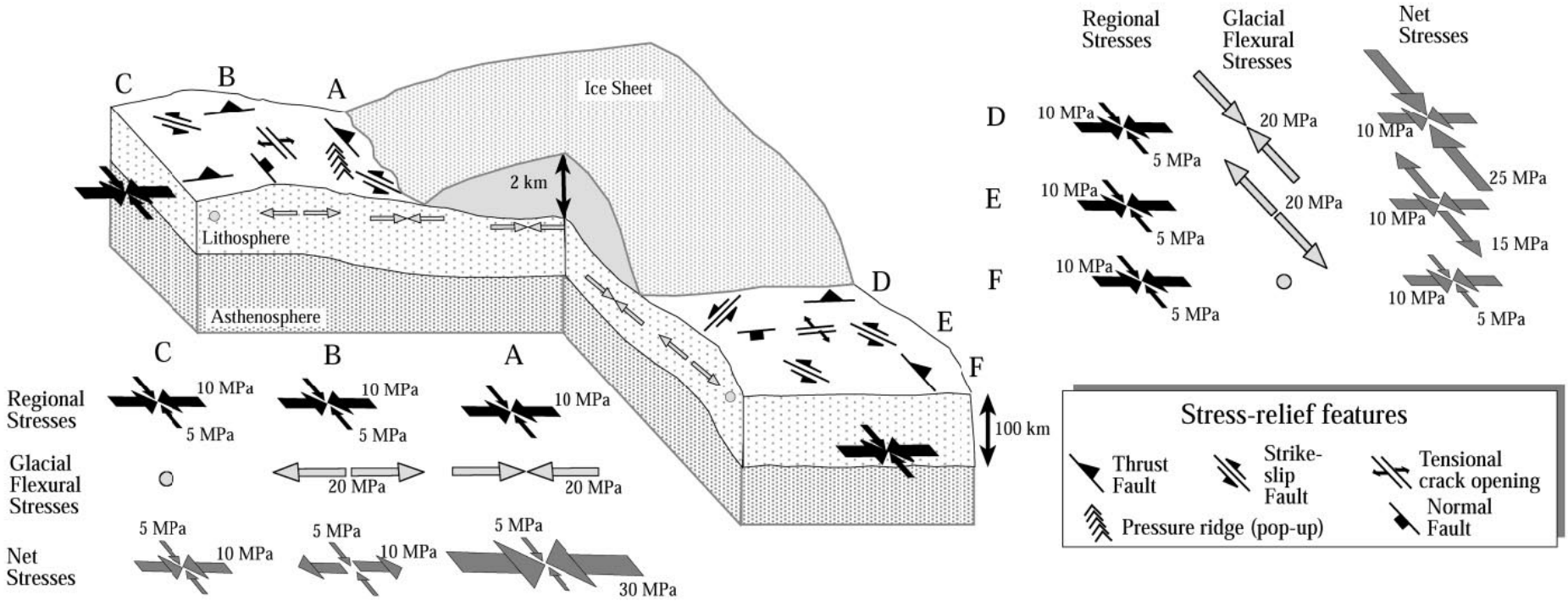
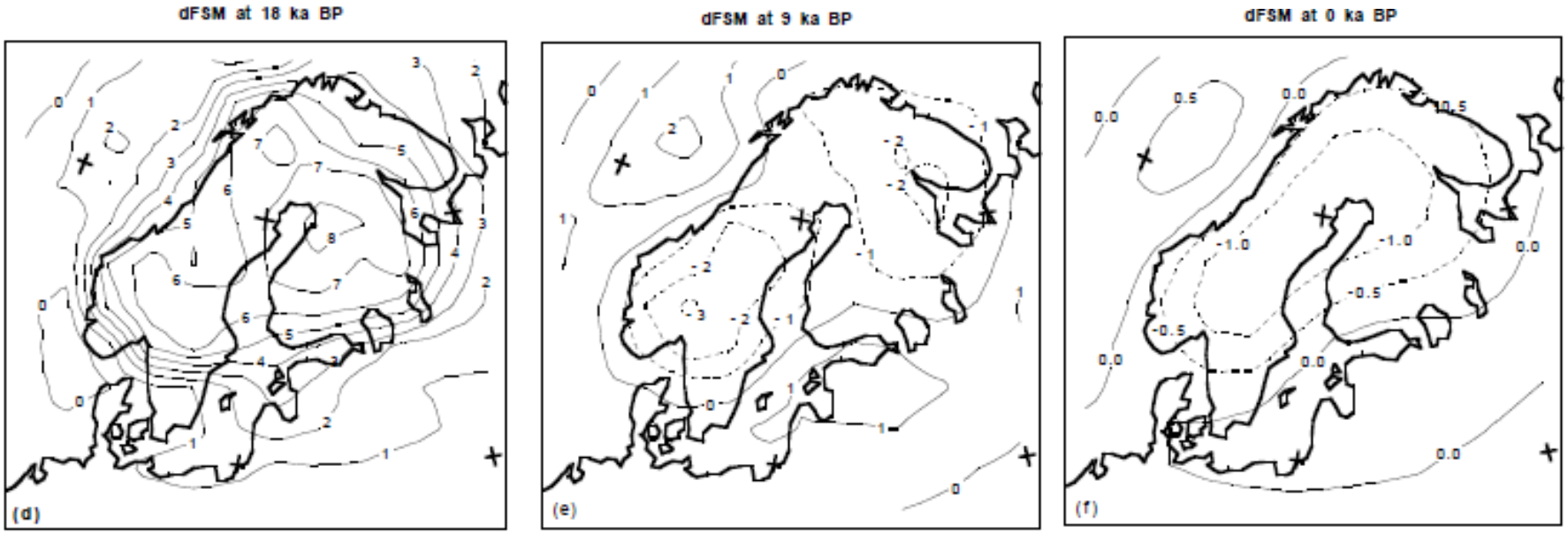
Tectonic and Glacially Induced



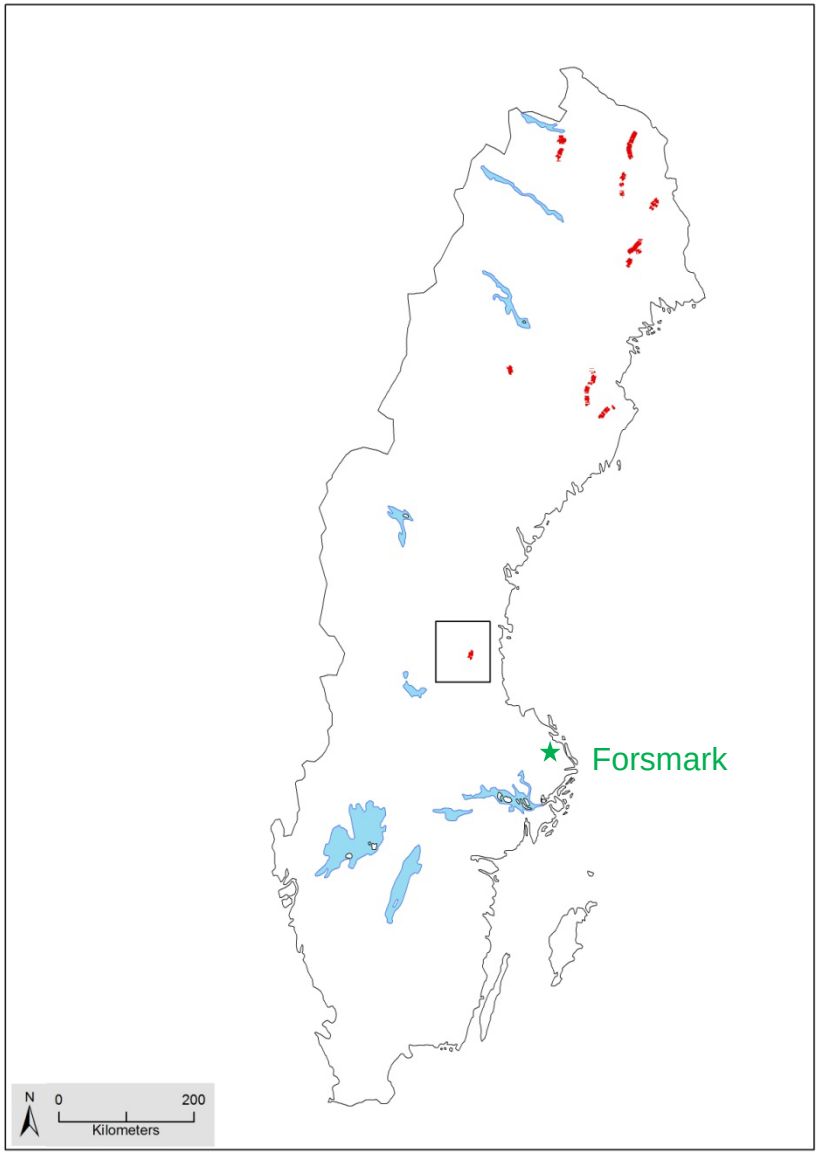
Stewart et al., 2000. QSR, 19, 1367-1389.

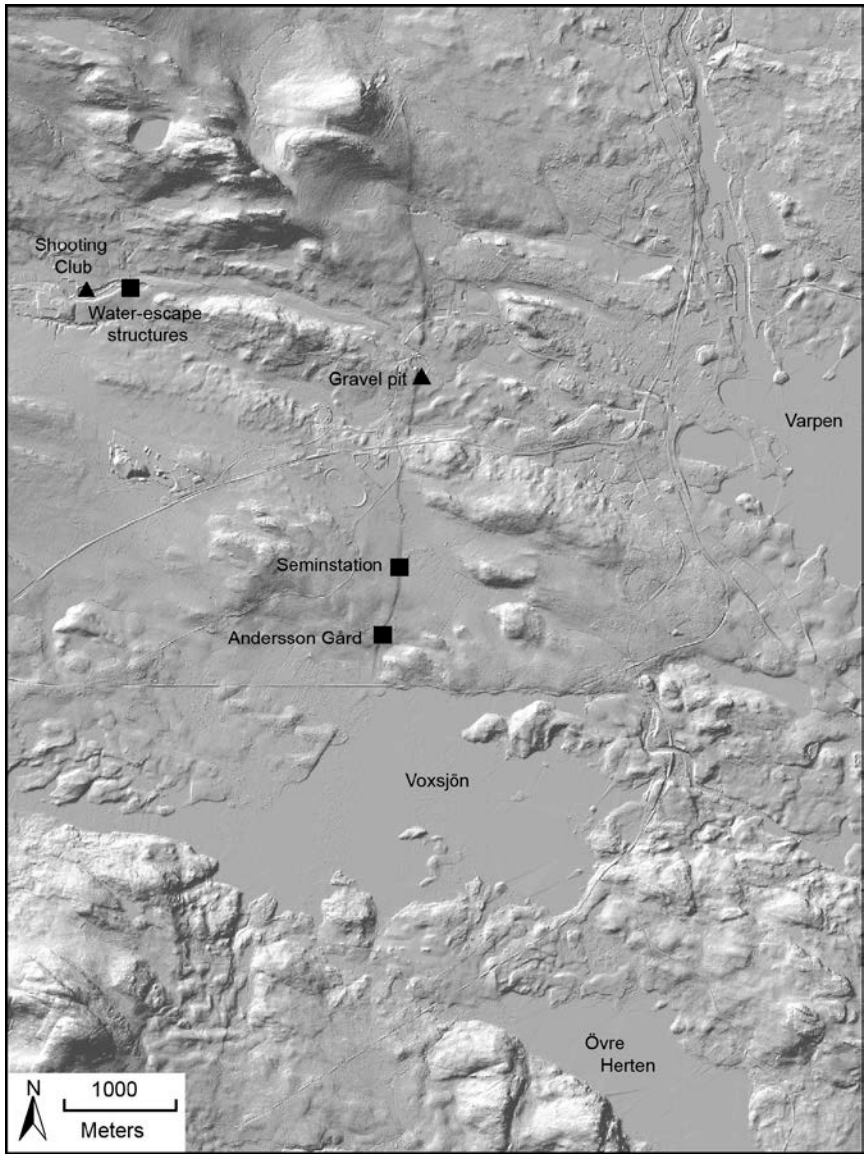
Fault Stability Margin



Wu, 1999. In Wu (ed), 443-458.

Mapped Post-glacial Fault Scarps in Sweden

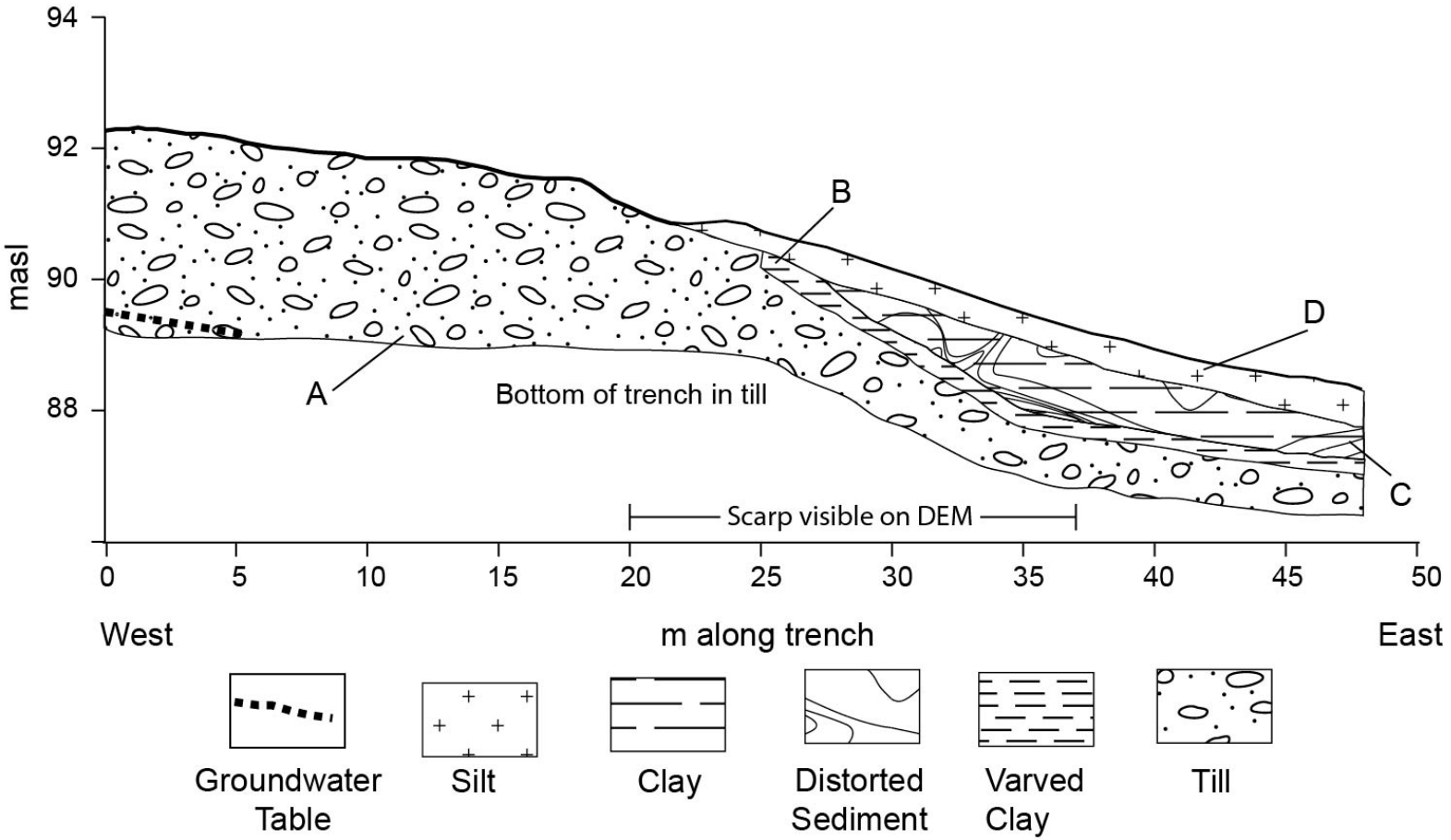




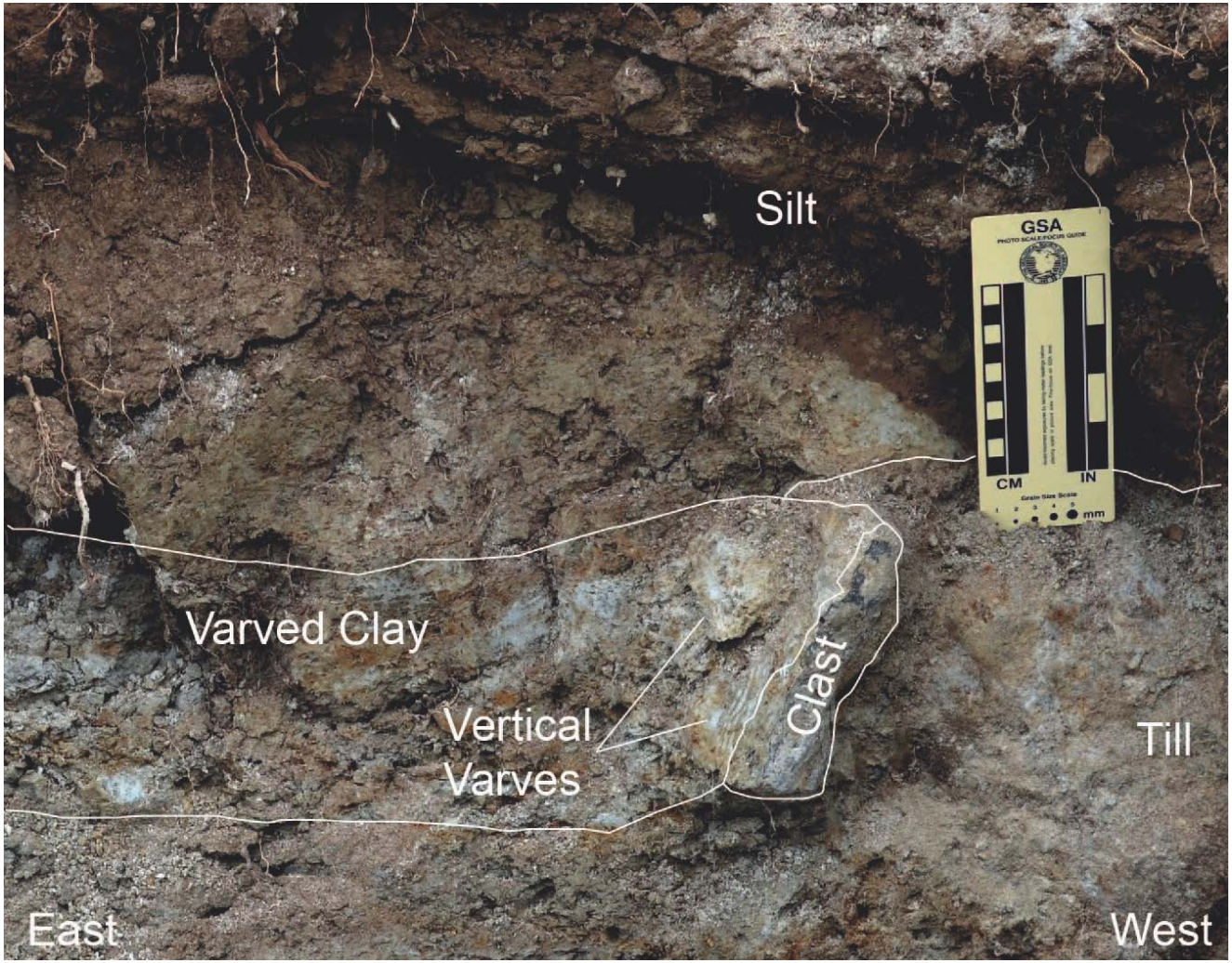
Multi-proxy evidence for post-glacial faulting

- Stratigraphy across the scarp
- Water-escape structures
- Landslides

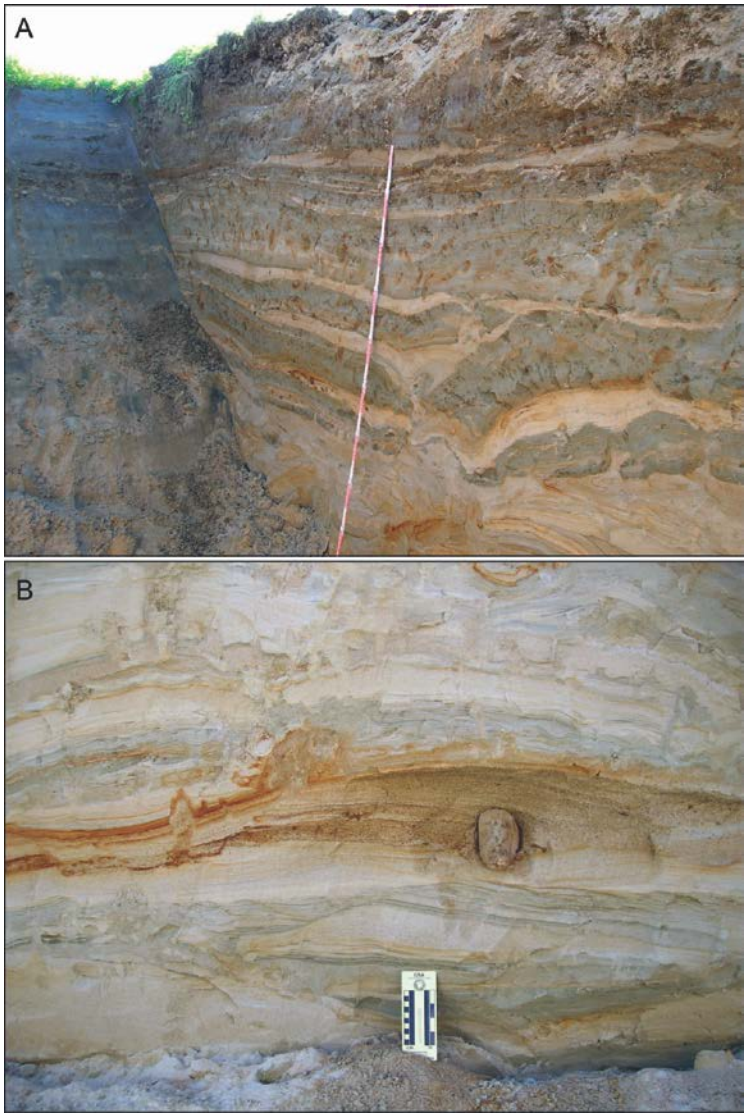
Stratigraphy: Andersson Gård



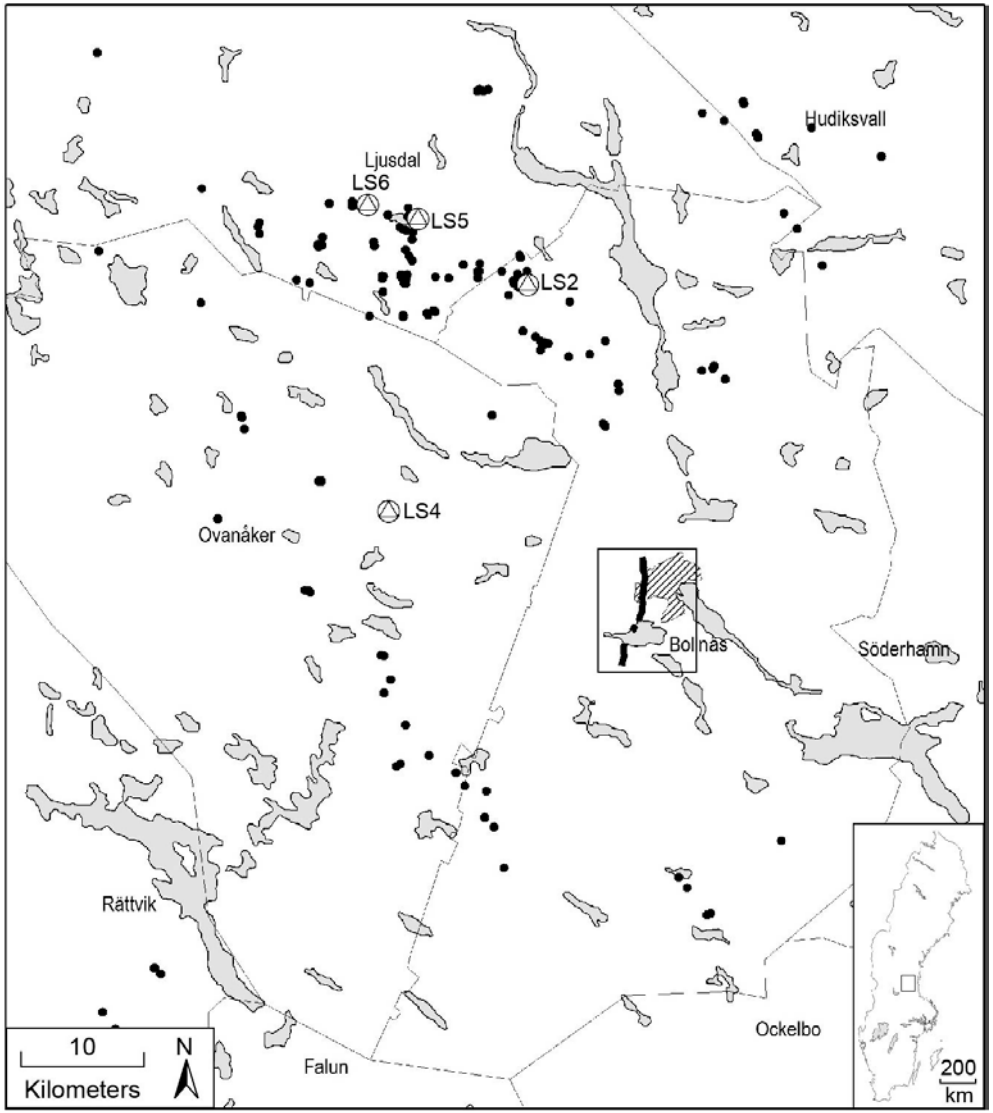
Stratigraphy: Faulted varves



Water-escape Structures: Eriksnäsbo



Landslide: Areal distribution



Landslides: Calibrated Radiocarbon Dates and factors of safety

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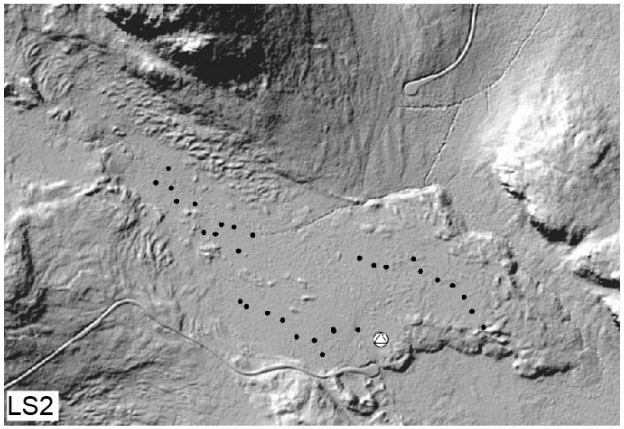

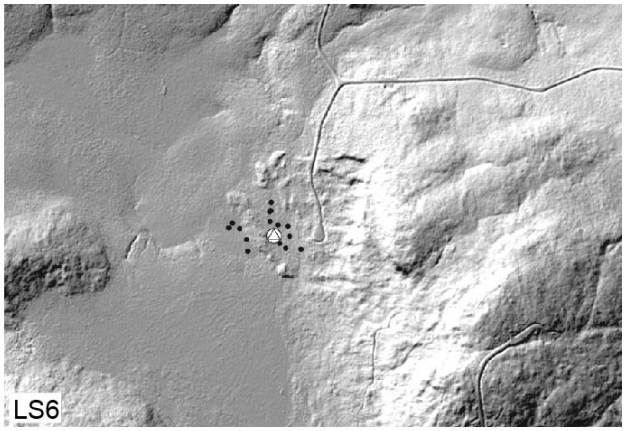

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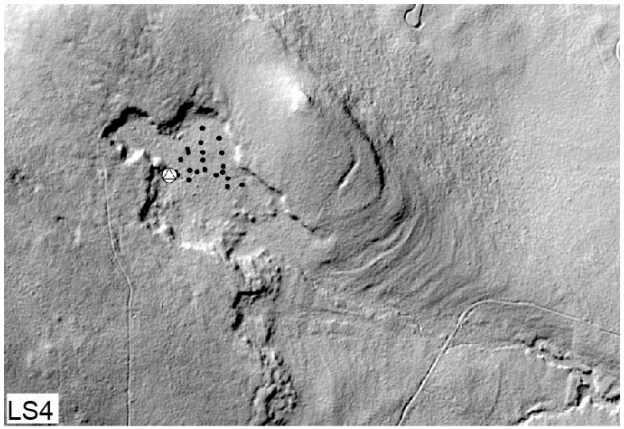

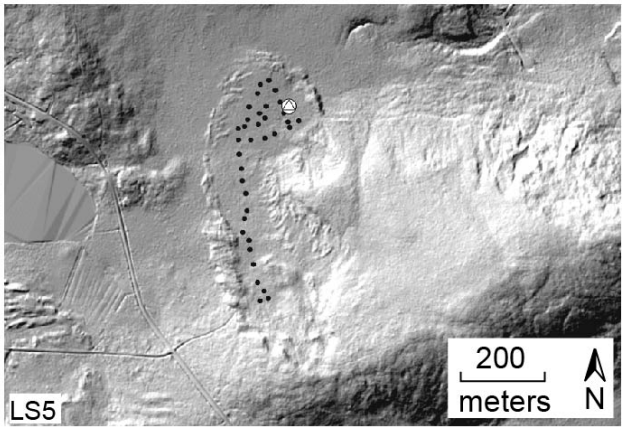

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Local deglaciation occurred after ~ 10 900 YBP (Berglund, 2005)

Conclusions

- Stratigraphies indicate landslides down the scarp and faulted glacial deposits.
- Water-escape structures on a topographic high suggest seismicity, compaction, and expulsion of sand-laden water.
- Landslides are located on stable slopes and are interpreted to be seismically triggered shortly after deglaciation.