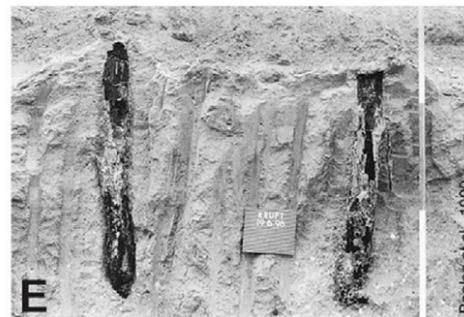
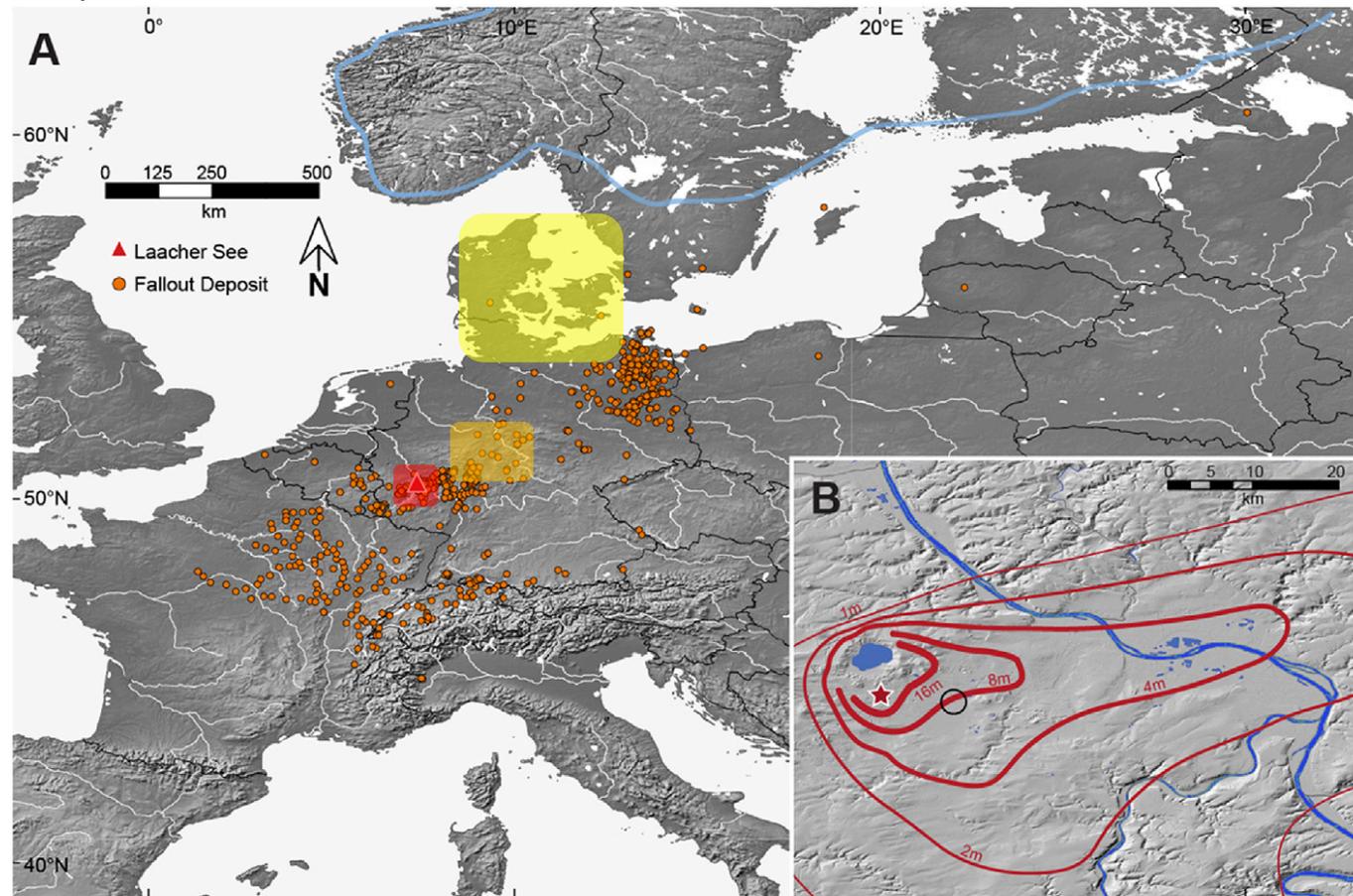


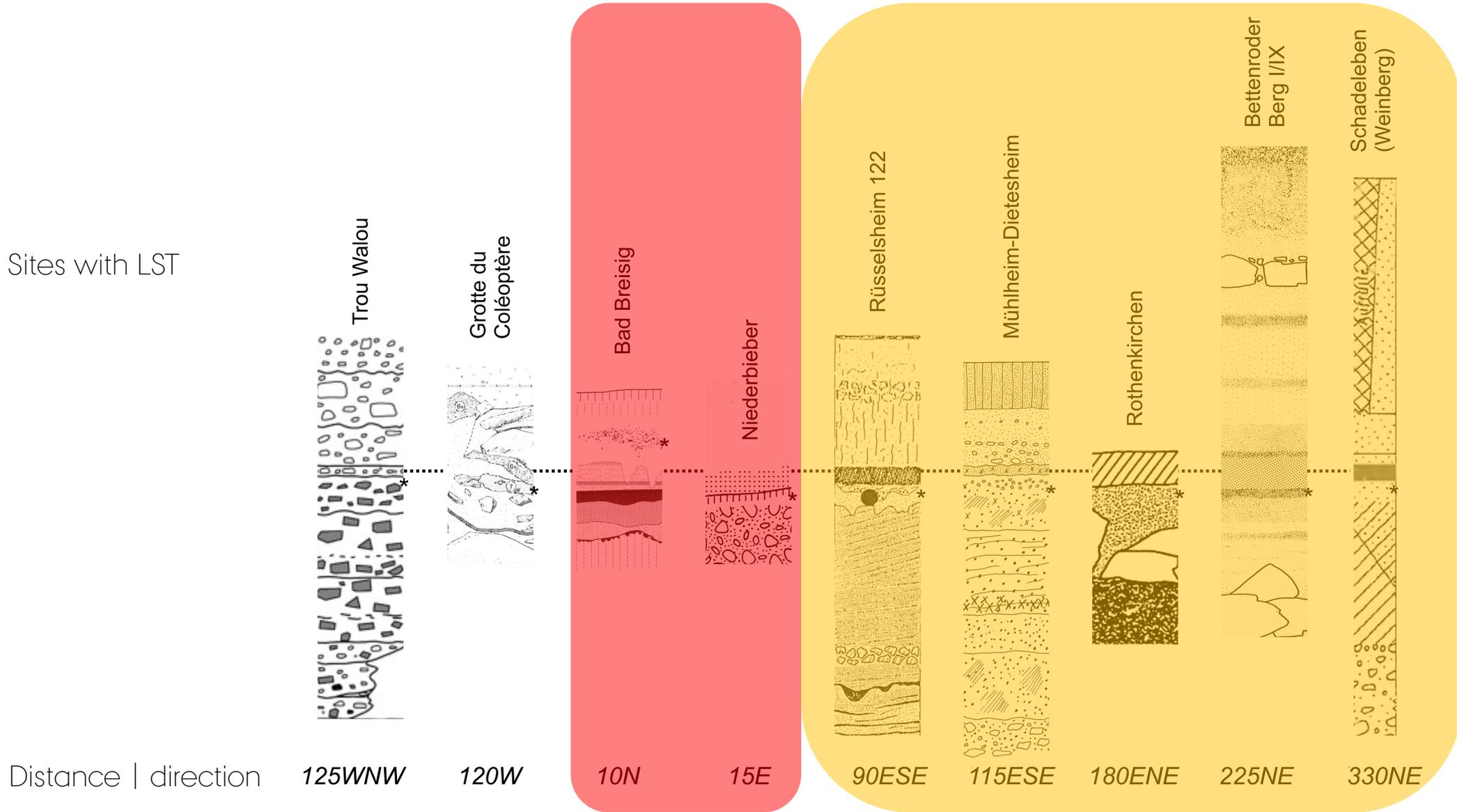
APOCALYPSE THEN?

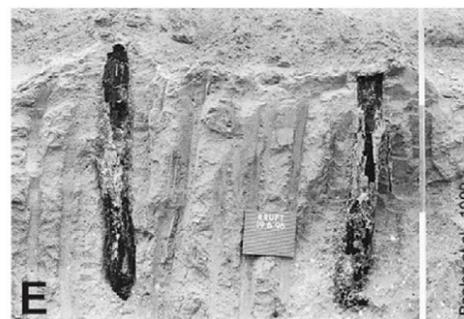
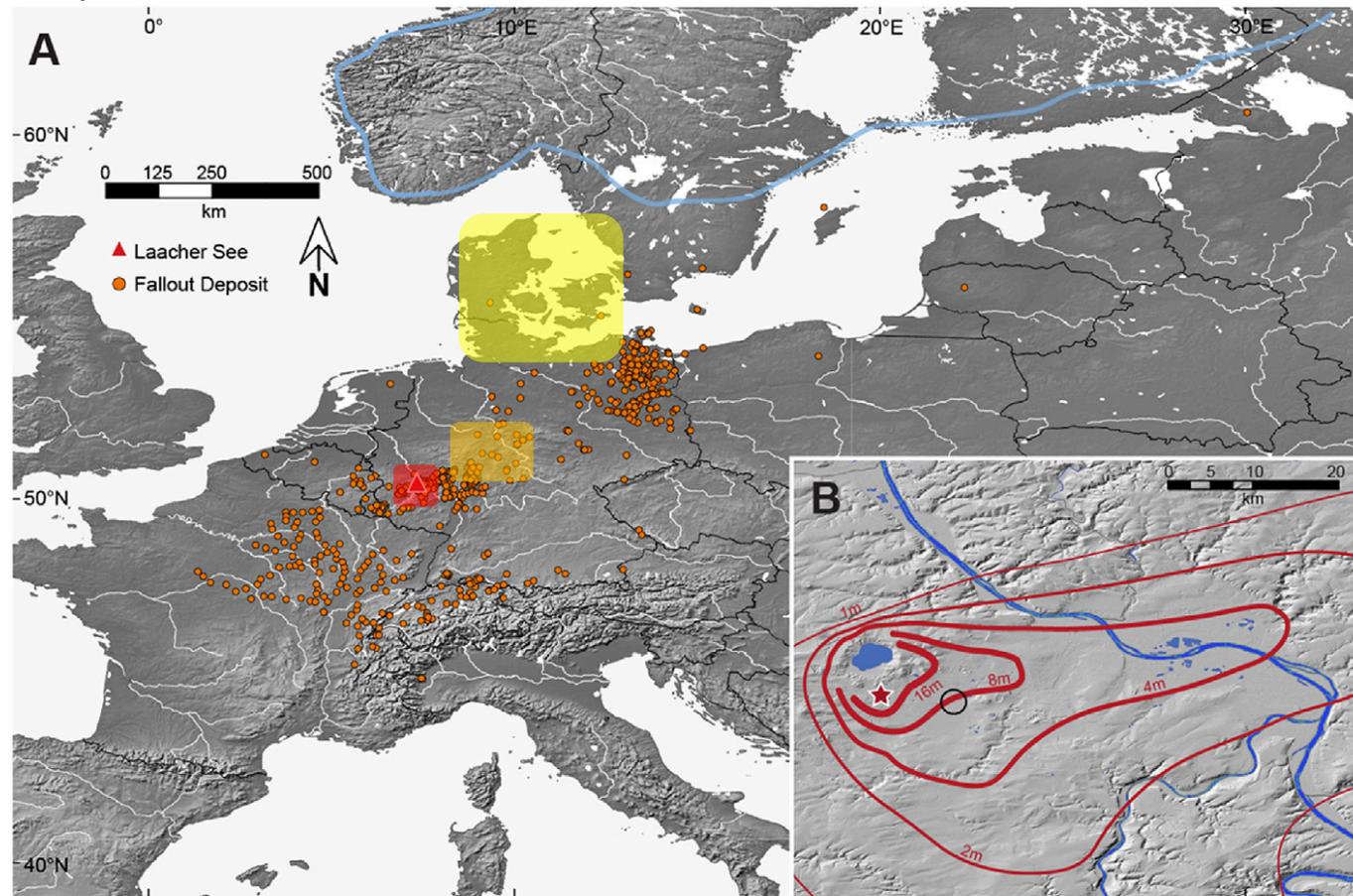
THE LAACHER SEE ERUPTION (13ka BP) AND ITS HUMAN IMPACT ALONG A PROXIMAL-TO-DISTAL TRANSECT



- Eruption date: ~13ka BP.
- Large ($M= 6.2$) and intense ($I \geq 11.5$) Plinian eruption.
- Rhine dammed – later dam-break flood.
- 1,400+ km² covered in near-vent deposits between 50-1m.
- 20-40 km tall ash column.
- 20+ km³ ejected over several days to months.
- A late ice age sealed landscape:
 - Animal tracks.
 - Burned forests & other macro-botanical remains.
 - Plethora of archaeological sites of all sizes.

Sites with LST





- Devastation and depopulation ~100-200 years (Waldmann et al. 2001).
- Ash-fall impacts on ecosystem services:
 - Mechanical destruction of plants (Riede et al. 2011).
 - F-toxicosis in animals/humans (Riede & Kierdorf, under review).
 - Negative respiratory impacts due to low grain size (Riede & Bazely 2009).
 - Severe dental abrasion due to ash ingestion (Riede & Wheeler 2009).
 - Avoidance of medial region until YD (Riede 2016).
- Refugial migration (c14 dates, site count) and relative isolation leading to cultural change (Riede & Edinborough 2012; Riede 2017).

Future work: New sites? Weather and climate impact?

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