

Permafrost Evolution on the British Isles during the Last Deglaciation

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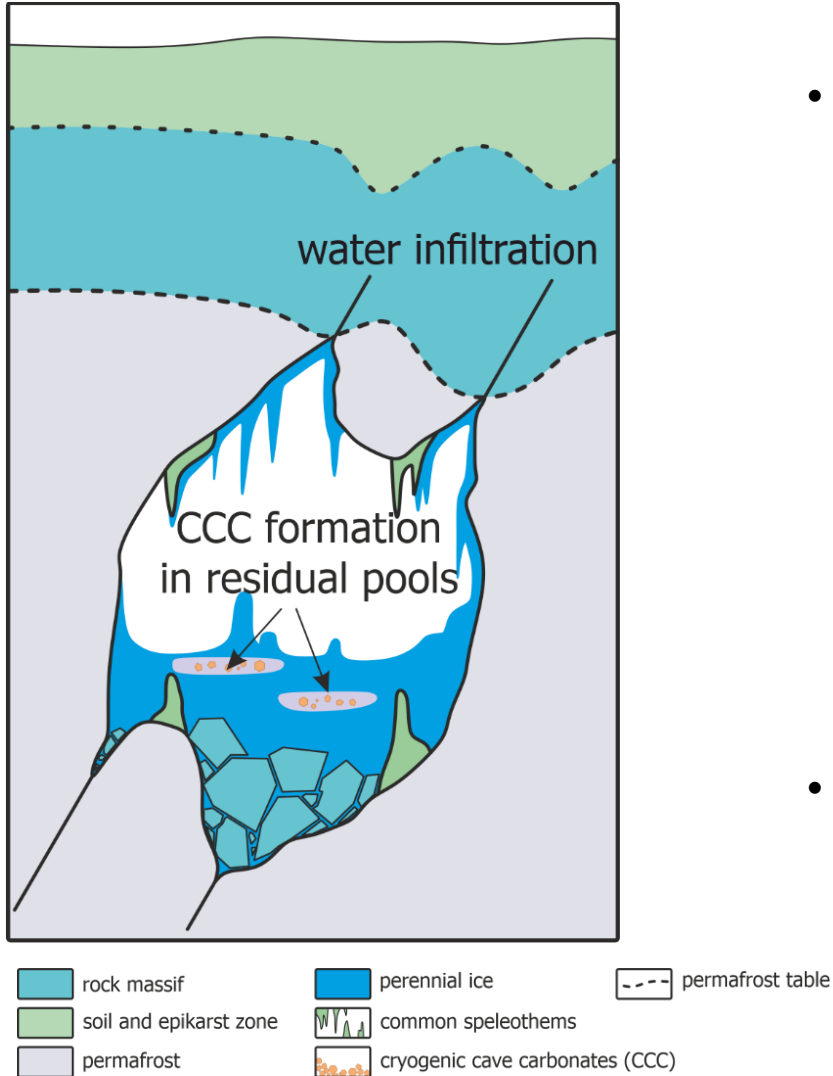
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Cryogenic Cave Carbonates (CCCs)

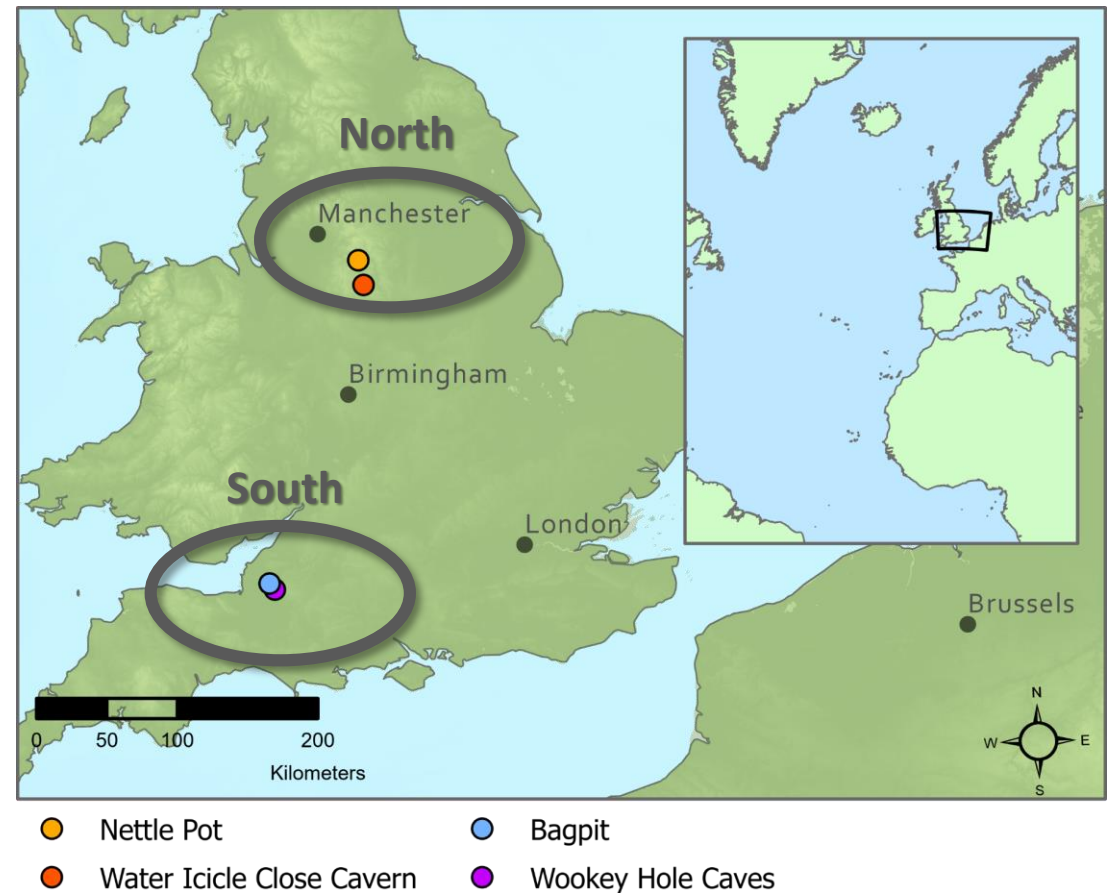


modified from Žák et al., 2012 (ClimPast)

- Precipitate from **slowly freezing pools of water**
- Cave air temperature between approximately **-2 °C and 0 °C** (i.e. the *CCC formation window*)
- Infiltration of **liquid water**
- may imply isothermal temperature profile and **thawing permafrost**

Sites and Methods

- **4 caves** from 2 regions
- **12 CCC occurrences** in total
- 58 $^{230}\text{Th}/\text{U}$ analyses compiled for **isochron dating**



Status: this preprint is currently under review for the journal GChron.

$^{230}\text{Th}/\text{U}$ Isochron Dating of Cryogenic Cave Carbonates

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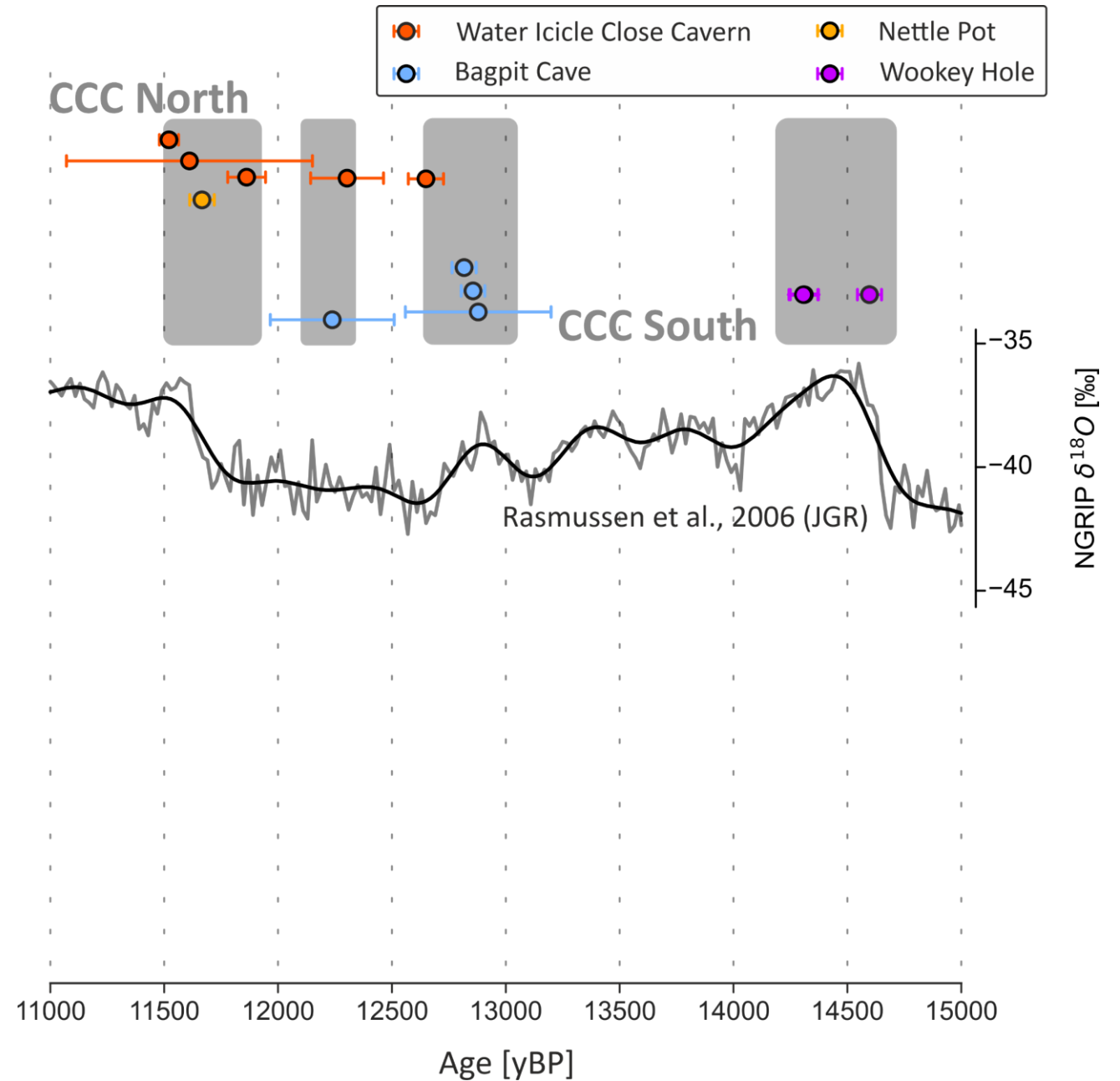
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Results

- 4 episodes of CCC activity
 - Bølling–Allerød
 - Greenland Interstadial 1a
 - mid Younger Dryas
 - onset Holocene



Conclusions

- Widespread **CCC formation at multiple sites** represents isothermal conditions
- These have prevailed for **several hundred years**
- Correlation with **sea ice** in the North Atlantic

