Retreat of the last British-Irish Ice Sheet

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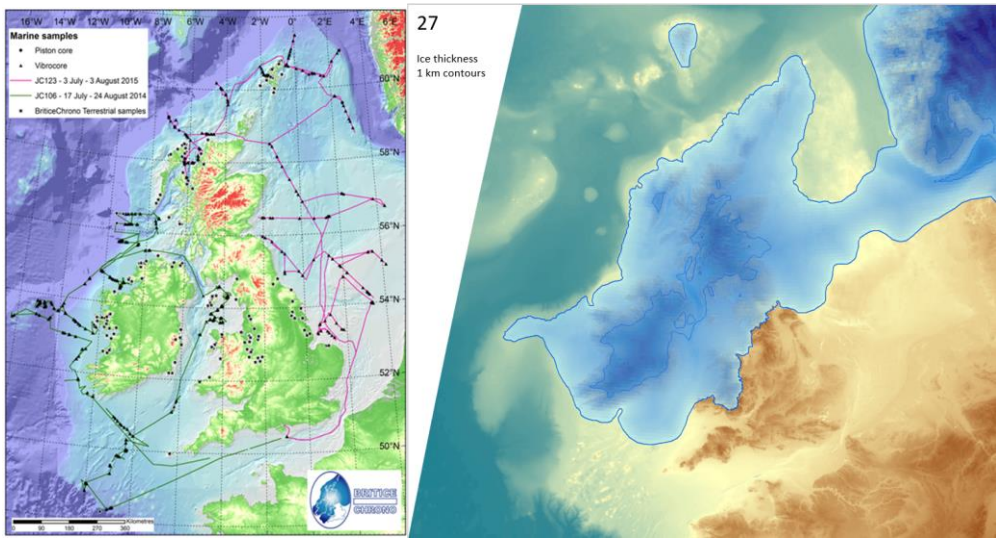
We have known for a long time that a kilometres-thick ice sheet largely covered Britain and Ireland during the last glacial, peaking at around 27,000 years ago. Most evidence for its geometry arises from tens of thousands of geological and geomorphological observations, but almost wholly restricted to land. The earliest researchers (e.g. Geike 1867) were happy to use simple glaciological logic (presumed ice sheet symmetry) to reconstruct ice margins that reached far offshore and to the continental shelf edge. Such views were rejected by more conservative and evidence-based approaches that followed, leading to reconstructions of a mostly terrestrially-restricted ice sheet. Numerical ice sheet models of the time did what they were told regarding ice limits. Over the last decade the focus of investigation has moved offshore, enabled by new high resolution bathymetric and shallow seismic data, and leading to a 'gold-rush' of discoveries that have transformed our understanding. The continental shelf has abundant evidence of grounded ice cover.



BRITICE-CHRONO sample locations. *Ice sheet model output for 27,000 year BP*

The BRITICE-CHRONO consortium of researchers has been a six year project to constrain the timing of retreat of the British-Irish Ice Sheet by a systematic dating programme focussed on the marine-to-terrestrial transition. From two research cruises some 18,000 km of geophysical data and 377 vibro- and piston cores, along with many stratigraphic sections on land have been used to provide material for dating. The aims and objectives of the project and progress thus far will be reported along with some highlights from the various transects under investigation. The new BRITICE Glacial map of Britain and Ireland will be shown which contains some 170,000 glacial landforms.

***Bio**; Prof Chris Clark is the Sorby Chair of Geoscience at the University of Sheffield. His Phd (at the Grant Institute of Geology, Edinburgh) was on reconstructing the North American Ice Sheet and over the last decade his focus has been on the British Isles. He led the BRITICE-CHRONO project (http://www.britice-chrono.group.shef.ac.uk/) (2012-2018; £3.7 M) which has dated the retreat of the ice sheet. In his spare time he runs a small flock of sheep in the Peak district.*