



Reconciling geomorphological and geochronological evidence with ice sheet modelling of the British-Irish Ice Sheet

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The evidence left behind by the British-Irish Ice Sheet has been studied for over 150 years. This has led to a vast body of geomorphological and geochronological evidence constraining the dynamics and timing of this ice sheet. An aim of BRITICE-CHRONO, a large consortium project, is to compile and augment this evidence for the purpose of helping numerical ice sheet modelling simulations. By the end of the project, the British-Irish Ice Sheet will become a key testing ground for numerical ice sheet models. Here we show how the wealth of geomorphological and geochronological data has been compiled. Over 200,000 geomorphological features, gathered from over 1,000 publications, have been synthesised into an updated glacial map of Britain and Ireland. Over 1,000 dates from the literature have been collated, and the quality of these dates for constraining ice sheet retreat have been assessed. The BRITICE-CHRONO project is currently analysing samples to produce an additional 885 dates. We discuss how this empirical data on ice retreat could be reconciled with ice sheet modelling, noting that it is important to consider the uncertainties involved with both. Furthermore, we demonstrate an approach to fixing a modelled ice sheet margin to an empirical reconstruction.