



Glacilacustrine sediments in the Irish Midlands: the potential for a Late Weichselian varve chronology for the British-Irish ice sheet

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Rhythmically laminated proglacial glacilacustrine sediments from central Ireland were examined in order to assess their potential for use in establishing a varve chronology to date the recession of the B.I.I.S. during the late Weichselian. The sediments consist of layers of internally laminated coarser, pale silts alternating with thin, dark clay laminae. Detailed sedimentological logging and S.E.M. analyses of grain fabric and surface textures indicates that the clay laminae have characteristics indicative of deposition during a winter freeze-up, including grain fabrics consistent with grain-by-grain deposition, sharp upper and lower contacts and the presence of occasional thin laminae of subglacially derived coarse silt. In contrast, coarse silt layers were deposited as both single grain and flocculated aggregates from a combination of density current and suspension deposition and contain much wind-blown material, consistent with summer deposition. The varves could be correlated on the basis of thickness at 500m spacing. As glacilacustrine deposits are found extensively under raised bog across the Irish Midlands, the potential exists to establish a high resolution varve chronology which would allow accurate correlation of events on land with marine and ice core records for this period.