Early Weichselian glacial history in western Finland

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Glacial history of Fennoscandia and adjacent areas are mainly based on litho-, bio and chronostratigraphical evidence. Several ice advance events across Finland have caused erosion and subglacial deformation of previously deposited sediments. Therefore, most of the pre-Late Weichselian sediments have been eroded completely or severely glaciotaectonised and subglacially deformed complicating attempts to reconstruct a firm glaciational history for Finland. However, in western Finland (Ostrobothnia) and central Finnish Lapland the pre-Late Weichselian sediments occurring beneath the Late Weichselian till are more abundant compared to the rest of Finland and sediments from these areas provide the best opportunity to shed light on the glaciational history of Finland. Here an attempt is made to critically analyse the events that took place during the Early Weichselian in western Finland. For this purpose new litho-, bio- and geochronological results of the multiple till successions, interbedded with interstadial sediments, at Koivusaarenneva and Muhos, in central western Finland adjacent to the Gulf of Bothnia are presented. The results of these sites are compared to previously published and also new data from other pre-Weichselian sites in western Finland in order to have a comprehensive picture of the Weichselian history of the area.