Reviewed research article

Geomorphic implications of the retreat of Breiðamerkurjökull in the southern part of the Skálabjörg ridge, Esjufjöll, Iceland

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Abstract — *The Skálabjörg nunatak, one of the summits of the Esjufjöll central volcano (SE Iceland), has been glacially eroded by the Breiðamerkurjökull outlet glacier for thousands of years. Since the end of the Little Ice Age, six to eight lateral moraine ridges have formed on the slopes of Skálabjörg. Ice-dammed lakes have also developed in the southernmost part of Skálabjörg and in Fossadalur. The highest and largest moraine ridge is situated 85–98 m above the contemporary glacier margin. Dating based on lichenometry, cartographic and photographic documentation indicates that the initial exposure of the highest moraine ridge occurred between AD 1896 and 1930 along its eastern margin and between AD 1915 and 1930 along its southwestern margin, giving an average glacier surface lowering rate of 0.8–1.3 m/yr in the southern hills of Skálabjörg. Hills above the highest moraine ridge bear imprints of earlier glaciation, most notably glacially abraded rock outcrops and transported boulders. Small active solifluction tongues and lobes with stone-armoured fronts cover the surface above the LIA limit. Small-scale and large-scale stripes exhibiting sorting down to c. 15 cm are abundant. The uppermost parts of the Skálabjörg nunatak are heavily frost-weathered bedrock outcrops, and can be classified as a typical periglacial domain.*