

# Archaeological research in Skagafjörður, summer 2009

## Tephra layers

### Magnús Á. Sigurgeirsson

Geologist/ tephra expert

E-mail address: [magnus.a.sigurgeirsson@isor.is](mailto:magnus.a.sigurgeirsson@isor.is)

## INTRODUCTION

On July 27<sup>th</sup> 2009, five SASS archaeological research sites in Skagafjörður were visited, i.e. at Stóra Seyla, Páfastaðir, Kjartansstaðir, Stóragröf syðri and Litlagröf. All the sites are located on the west side of the Skagafjörður valley, along the east side of the Langholt ridge.

Profiles from test trenches were examined in detail and sampled. Identification of the tephra layers is based on previous studies in North Iceland (Thorarinsson 1967, Larsen 1984, Ólafsson 1985, Einarsson *et al.* 1988, Sveinbjarnardóttir 1992, Grönvold *et al.* 1995, Sigurgeirsson 1998, 2000, 2001, 2002).

In 2002, the chemistry of historic tephra horizons from the Skagafjörður region was analyzed (see Sigurgeirsson 2002). Tephra samples from two different sites were collected for that purpose, i.e. c. 1 km north of Melstaður and at Reynisstaður. The most useful tephra layers regarding archaeology in Skagafjörður are the Landnám Tephra layer from 870-880 AD, Vj~1000<sup>1</sup>, Hekla-1104, Hekla-1300 and Hekla-1766. Only traces of Veidivötn-1477 have been found, which makes it less useful than the others. The tephra layers Vj~1000 and Hekla-1104 are generally well preserved along the west side of the Skagafjörður valley, the main research area of the SASS project. This pair of tephra layers makes possible dating of the initial occupation phases of farms in Skagafjörður.

Besides the aforementioned tephra layers, a sequence of 2-3 tightly spaced basaltic tephra layers, called the Landnám Sequence (LNS) has proved to be very useful. In the Skagafjörður region the uppermost tephra of the LNS is the Landnám Tephra Layer, dating to 870-880 AD.

In 2007 and 2008 archaeologists noticed a thin basaltic tephra horizon located between Vj~1000 tephra and the LNS in profiles at Stóra Seyla and Marbæli, respectively (see Steinberg *et al.* 2007, Steinberg *et al.* 2008). During the visit to the SASS sites of 2009, I was unable to find this layer, so a more detailed work is needed to resolve this.

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<sup>1</sup> According to chemical analysis the origin of this tephra layer is in one of the volcanic systems covered by the Vatnajökull glacier, most likely Grimsvötn volcano (Sigurgeirsson 2002). The exact age of the Vj~1000 tephra is not known. It might differ by a few decades from the present estimate which is based on soil thickening rate.

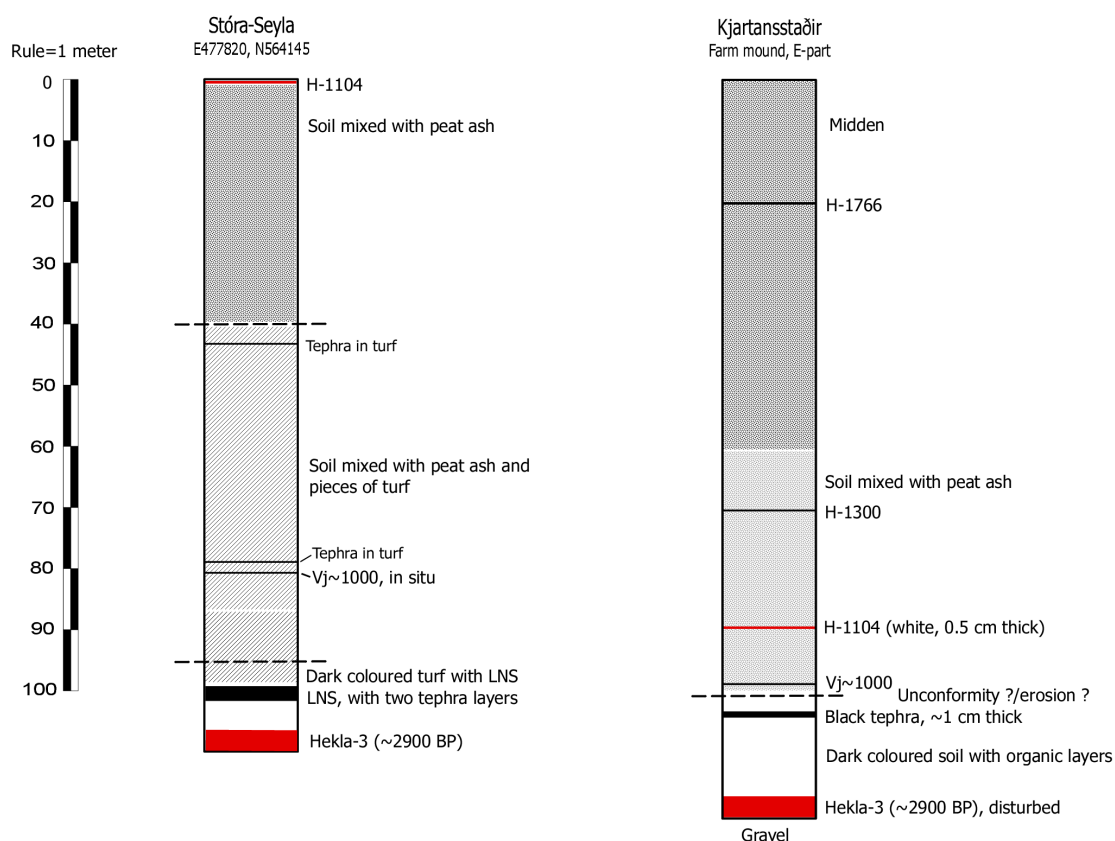
## RESULTS

### Stóra Seyla

One profile was measured from the archaeological dig at Stóra Seyla (Fig. 1 and Fig. 1 in appendix). The profile is located at E477820 and N564145 (local grid system). Cultural deposits, i.e. soil mixed with peat ash and pieces of turf, can be followed down the profile to the LNS (Fig. 1). Thin dark-coloured turf with the LNS is found overlying the LNS, but below Vj~1000. This turf must date back to the early 10<sup>th</sup> century AD.

### Páfastaðir

Profiles from two test trenches from the eastern part of an old farm mound at Páfastaðir were described (not measured). In the southern trench, the lowermost parts of the profiles were eroded/disturbed. Channels had been carved into the soil by running water, partly filled by gravel (Fig. 2 in appendix).



**Figure 1.** Soil sections at Stóra Seyla and Kjartansstaðir.

In the northern trench the tephra layer Vj~1000 was identified on top of an erosion channel at the bottom of the trench. The tephra layers Vj~1000, H-1104, H-1300 and H-1766 were identified in the profiles of the trenches. Cultural layers were seen extending

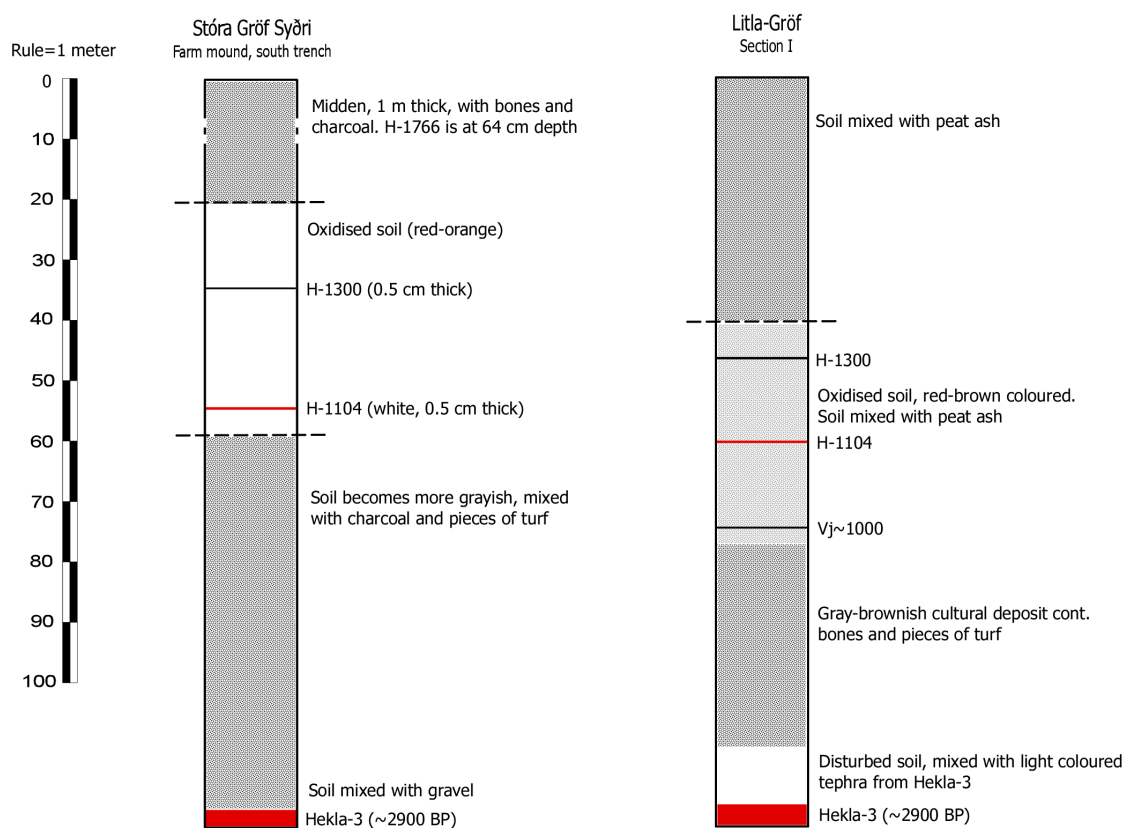
down to approximately 5 cm below the Vj~1000 tephra. As at Stóra Seyla, 10<sup>th</sup> century cultural deposits were found at Páfastaðir.

### Kjartansstaðir

A profile was measured from the eastern part of the Kjartansstaðir farm mound (Fig. 1 and Fig. 3 in appendix). The upper half of the profile is composed of a midden. At 60 cm depth it changes to soil mixed with peat ash. The tephra layer Vj~1000 is found at 96 cm depth. At c. 1 m depth the soil changes to a dark coloured sterile soil, containing the LNS *in situ*. The oldest indications of human activities at Kjartansstaðir, soil mixed with peat ash, date to late 9<sup>th</sup> or early 10<sup>th</sup> century AD.

### Stóra Gröf syðri

A profile was measured from a trench dug into an old farm mound at Stóra Gröf syðri, located east of the present farm site (Fig. 2, and Fig. 4 in appendix). Another test trench had been dug c. 100 m to the north, most probably into a second farm mound at this farm site. There a cultural layer was found extending down to c. 4 cm below Vj~1000, almost reaching the top of the LNS. The earliest occupation of this site most probably dates to the early 10<sup>th</sup> century AD.



**Figure 2.** Soil sections at Stóra Gröf syðri and Litla Gröf.

## Litla Gröf

One profile was measured from the farm mound at Litla Gröf (Fig. 2 and Fig. 5 in appendix). In short, cultural layers were seen capping the LNS. The oldest indications of human activities date back to the late 9<sup>th</sup> or early 10<sup>th</sup> century AD.

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**APPENDIX I. Photographs, profiles studied in summer 2009.**

**Figure 1.** Soil section from the Stóra Seyla archaeological dig. The lowermost flag point to the Vj~1000 tephra. The LNS is preserved in dark-brown soil close to the base of the section.

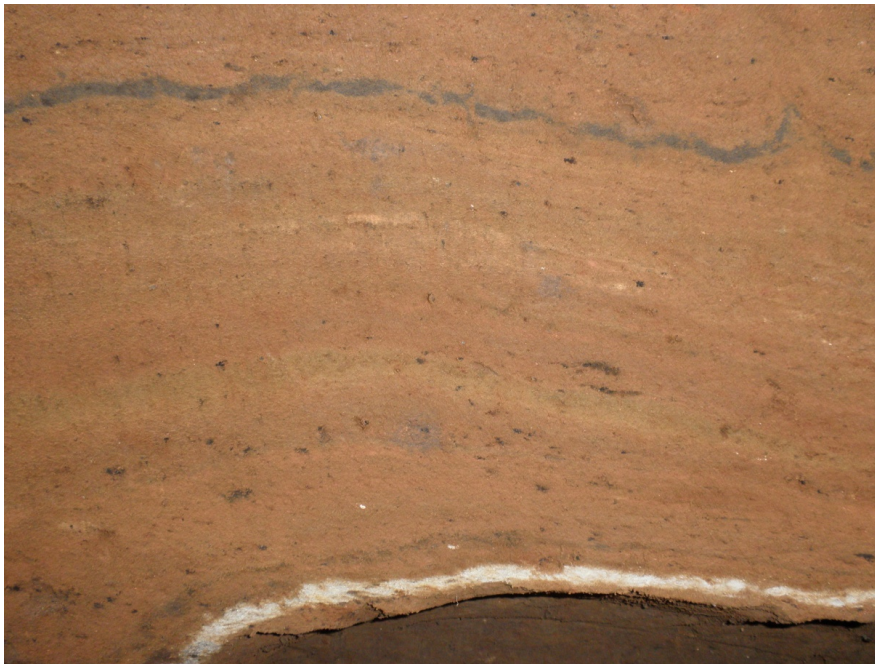


**Figure 2.** Soil section at Páfastaðir. Erosion channel into the Hekla-3 tephra may be seen at bottom of the pit, overlaid by the LNS (dark coloured soil).





**Figure 3.** Soil section from Kjartansstaðir. The tephra layers H-1300 (blue pin), H-1104 (white) and Vj~1000 (white pin) are preserved in the profile. Just above the Hekla-3 tephra (light coloured tephra at the base), a dark-brownish soil with the LNS appears.



**Figure 4.** The tephra layers H-1300 and H-1104 from the south trench at Stóra Gröf syðri. The soil between the tephra layers is mixed with peat ash, giving it the red-orange hues.



**Figure 5.** The tephra layers H-1300 (gray), H-1104 (white) and Vj~1000 (gray-greenish) in profile at Litla Gröf.