

# ICELANDIC RESEARCH FUND

## ANNUAL REPORT

The annual report covers the grant period for the calendar year (01.01. - 31.12.).

A signed copy of the annual report shall be submitted to Rannís by email to

[rannsoknasjodur@rannis.is](mailto:rannsoknasjodur@rannis.is) – Subject: IRF - Annual report.

**Grant number:** 217821-051

**Project title:** Power, Wealth and Plague in Two Valleys: Svarfaðardalur, Hörgárdalur and their hinterlands ca. AD 870-1500

**Grant year:** 2022

**Project leader:** Árni Daníel Júlíusson

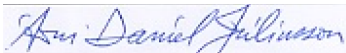

**Project leader email:** adj@hi.is

**Type of grant:** Grant of Excellence

**Expert panel:** Kristian Kristiansen, University of Göteborg, Lotte Hedeager, University of Oslo, Karen van Niekerk, University of Bergen and Guðmundur Ólafsson, National Museum of Iceland.

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**Signatures** to certify that all information in the **annual scientific** and **budget reports** is correct and that the reports include all relevant information:

Date and place	
Akureyri, February 1, 2023	
Project leader	
	
Person responsible for research facilities	

**To be filled out by Rannís:**

Date annual report received	
Grant previously paid	
Grant paid upon approval of annual report	
Annual report approved (date and signature)	

## SCIENTIFIC REPORT

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## PROGRESS REPORT FOR THE GRANT YEAR

Describe the progress of the project; main results, milestones reached and other achievements or outputs. Please refer to the milestones in the application. If there are deviations from the original research plan, please explain the need or rationale for those changes.

## Main results

### Main activities of the Two Valley project in 2022

#### January-April

The research activity of the Two Valley project proceeded as planned on all fronts during early 2022. The annual project report to RANNÍS was handed in and accepted. Analysis of the results of the field work from the summer season 2021 continued apace. Analysis of tephra samples from Svarfaðardalur earth walls, carried out by project geologist Árne Hjartarsson were ready by March. A related project, TRANSICE, with some of the same personnel like Egill Erlendsson, Elín Ósk Hreiðarsdóttir and Árni Daníel Júlíusson, was awarded a project grant in the yearly decision of Rannsóknarsjóður of which projects to support in January. This project is called „The Rise and Fall of Transhumance in Iceland 800-1800“. Part of this project is research on location in shieling remains in the Two Valley area, which strengthens the analysis of the Two Valley project itself in a number of ways. During this period a joint organisation of TRANSICE and the Two Valley project for the summer season in 2022 in Eyjafjörður took place. The activity of the Two Valley project would now turn to the other valley of the project, Hörgárdalur.

Two publications related to the project appeared in early 2022. The article „Á eyðibýlum norðanlands“ appeared in the journal of the Icelandic archaeological society, *Árbók hins íslenska fornleifafélags* 110. year, p. 43-77. An article with an overview of the project, its aims and purposes, appeared in the local historical journal of Eyjafjörður, *Súlur*. This article was called „Tveir dalir í Eyjafirði – Svarfaðardalur og Hörgárdalur. Rannsóknir á miðaldasögu og miðaldaleifum 2021 til 2023.“ Both publications were written by one of the two PI's, Árni Daníel Júlíusson.

Dissemination also occurred in a university course, *Ný viðhorf í umhverfis- og samfélagsögu*, taught by the PI Árni Daníel Júlíusson in Háskóli Íslands. It was an interdisciplinary MA course in the Faculty of the Humanities with the participation of 10 students. The course dealt with the various projects in which the PI is active, but primary among them was the Two Valleys project. Prof. Egill Erlendsson from the Two Valley project attended the course with a lecture. Other lecturers in the course were from other projects were Árni Daníel was or is a participant, Viðar Hreinsson and Ragnhildur Sigurðardóttir from Myseac (funded by a project grant from Rannsóknarsjóður 2016-2018),

Gylfi Helgason from TRANSICE and George Hambrecht from CAMHEP (funded by NSF 2021-2023).

In May further dissemination took place at the Söguþing 2022, the Icelandic Historical Conference, on May 19<sup>th</sup>. Árni Daníel lectured on a core issue of the Two Valley project, the settlement structure and development of settlement in the two valleys of Svarfaðardalur and Hörgárdalur 880-1400 in a panel on the history of the settlement with three other participants. This lecture, called „Landnám og byggðaupróun um miðbik Eyjafjarðar 880-1400“ is accessible with on the project website. He and another participant in the Two Valley project, Axel Kristinsson, participated in a panel dealing with a related issue, the retinues of chieftains in the Sturlung era, organised by Axel.

An illustrated report about the Two Valleys 2021 field season was posted on the project website during May, <https://twovalleys.hi.is/events/>.

Dissemination by the two project doctoral students started this year. In June Elísabet Ásta Eypórsdóttir presented a poster at a conference in Svalbard This was titled „Ecological impact of human occupation in Skíðadalur in North Iceland: preliminary results.“ Co-authors were Egill Erlendsson and Árni Daníel Júlíusson.

Also, in June an article by project geologist Halldór G. Pétursson appeared in the local history journal of *Heimaslóð*, published in Hörgárdalur. This article is called „Skriðuföllin í Hörgárdal árið 1390 og afdrif Gásakaupstaðar. Staðreyndir, hugmyndir og tilgátur“. *Heimaslóð* 19. hefti 2022, 5-39. This article is accessible on the project website: <https://twovalleys.hi.is/wp-5-geomorphology-and-natural-hazards/>

### June-August

During June to August the second field season of the Two Valley project took place in Hörgárdalur. Work packages 1, 2, 4 and 5 were all active in Hörgárdalur. WP1, settlement archaeological research was active from 21 June doing research on earth walls. Deserted ruins of suspected sub-tenancies in Skiptagerði in Gálmaströnd, Hola in Þelamörk, Kolgerði in Öxnadalur, Sandhólar on the land of Staðartunga in Hörgárdalur, and Saurbær, Kringlugerði and Hólkot on the land of Þúfnaveilir in Hörgárdalur had been selected for study in the preparations during winter. Test trenches were now made in earth walls around the haymeadows of these farms, looking for evidence of the age of the earth walls and thus the farm. Another part of the settlement research was analysis of the age of boundary walls. Test trenches were dug into such walls in Búðarnes and Staðartunga in Hörgárdalur and Engimýri, Varmavatnshólar and Skjaldarstaðir in Öxnadalur.

WP2, zooarchaeology research, was active in Staðartunga in Hörgárdalur and Hóll and Klaufabrekkukot in Svarfaðardalur. The bulk of the activity took place at Staðartunga where two trenches were dug into an old farm midden. A shipment of bones for analysis at the University of Bergen was the result of this activity. These remains are currently under preliminary analysis. Test trenches in Svarfaðardalur did not produce sites fit for midden analysis.

WP4, palaeoecological research was active in Hörgárdalur. Coring took place at three sites as in Svarfaðardalur in the season 2021, and the sites were selected with the same criteria. The goal was to acquire samples for palaeoecological analysis of low-status and high-status farm sites. The sites picked were at Ásgerðarstaðasel, Staðartunga and Hálskot in Hörgárdalur.

WP5, geological research was active in Langahlíð, Búðarnes in Hörgárdalur and Gásir in Kræklingahlíð, on the coast of Eyjafjörður. The activity in Langahlíð had the aim of locating the manor farm of Langahlíð, reported in annals to have been laid waste by a landslide during the autumn of 1390. Halldór G. Pétursson had put forward speculations surrounding the location of the farm in the aforementioned article, pointing to two possible sites. One of them proved to be the probable site of the manor house, in the old central haymeadow of Langahlíð (now called Skriða, meaning „Landslide“) farm. The whole haymeadow had been covered with gravel from the landslide in 1390, and in the part of the meadow closest to the mountain the probable manor house remains were found. Similar accounts of a landslide destroying a farm had been preserved for Búðarnes, further inland in the valley. The research also gave good results here, locating the old farm of Búðarnes in one of the test trenches. The research in Gásir, aimed at finding debris from the 1390 floods did, however, not produce results.

On August 10-11 the PI's of the project met in Bergen for discussion on the planning of the project and related subjects.

A detailed field report from Work Packages 1 and 2 in the Two Valley project in the year 2021 appeared in August. It is accessible on the project website [https://twovalleys.hi.is/wp-content/uploads/2022/10/POWER\\_WEALTH\\_AND\\_PLAGUE\\_IN\\_TWO\\_VALLEYS.pdf](https://twovalleys.hi.is/wp-content/uploads/2022/10/POWER_WEALTH_AND_PLAGUE_IN_TWO_VALLEYS.pdf).

### September-December

During the autumn season of the project analysis of the materials acquired in the summer season started. Also, the participants were active in dissemination, with Ramona Harrison, Egill Erlendsson and Elísabet Ásta Eypórsdóttir attending a conference, 28<sup>th</sup> annual EAA meeting, Budapest, Hungary, 31<sup>st</sup> of August until the 3<sup>rd</sup> of September 2022. Elísabet Ásta Eypórsdóttir presented a poster with Egill Erlendsson called „Landscape stability over 1100 years of pastoral farming in North Iceland“.

Ramona and Egill participated in meetings with a representative from the Brepols publishers, with the aim of planning a book, an anthology describing the results of the Two Valley project. This meeting went well and the book project will be further planned and discussed by project members and the publishers in autumn 2023.

In September, as part of the Human Agency and Global Challenges Conference hosted by the Humans and Materiality Research Group at AHKR/UiB, Ramona Harrison, currently leader of this research group, along with Árni Daníel Júlíusson presented a talk with the title of *The mechanisms of social change in medieval Iceland: A regional case study in Two Valleys*. In late September, at the 1st ICAZ Medieval Period Working Group Meeting in Bergen, Ramona Harrison presented a talk called *Scales of regional zooarchaeology in medieval Iceland*. Kristin L.R. Møller-Nilsen presented with Ramona Harrison a poster called „Medieval Zooarchaeology at Staðartunga farm in Northern Iceland. Establishing Research Protocol.“ Also in late September the PI Árni Daníel Júlíusson attended the NABO meeting in Reykjavík, on 29 September, where, together with Ramona Harrison, presented an overview of the Two Valleys project. Árni Daníel also attended a settlement history conference in Hólar in Hjaltadalur, Skagafjörður on 30 September, giving a talk related to the research of WP3, „Kristnihald og Landnámsjarðir“.

Sólborg Una Pálsdóttir, archaeologist and historian and presently the head of the Municipal Archives in Skagafjörður, became part of the project in December, as an MA-student at the University of Iceland, Faculty of Humanities. She will be active in WP6, analysing the representations of the Black Death 1402-1404 across various disciplines, archaeology, history, palaeoecology etc.

An article by Axel Kristinsson on one of the themes of the history aspect of the project appeared in the Icelandic historical journal *Saga* in the fall. This article is called „Voru goðorð arfgeng fyrir 1100“. Axel reviewed this article at a well-attended meeting in the Sagnfræðingafélag Íslands in Reykjavík in December 2023. A review by the other historian of WP3, Árni Daníel Júlíusson was published during the autumn in *Saga*, on Chris Callow's book on Eyjafjörður and Dalir in the Sagas and other medieval literature. The book is called *Landscape, Tradition and Power in Medieval Iceland*.

A Two Valleys project meeting was held in Reykjavík 25 November, attended by Axel, Árni Hjartarson, Árni Daníel, Ásta, Elín Ósk, Egill, Kristin, Stefán Ólafsson, Sólborg Una Pálsdóttir and Sveinn Brynjólfsson. Each participant presented the results of the work so far, giving an excellent overview of the project for everyone involved. Plans for next year's meeting in March and for next year's work were also discussed.

## Work Package 1 - Progress report

### Archaeological and historical investigation of the origin, extent and decline of the Hörgárdalur and Svarfaðardalur settlement

*Elin Ósk Hreiðarsdóttir*

#### **Main Aims and Results**

This work package investigates aspects of the settlement history of the Two Valleys area (Svarfaðardalur and Hörgárdalur and vicinity). The aim of the work package is to try and shed light on the likely date, extent, and nature of early settlement in the above-mentioned valleys as far as possible with small-scale investigations at various places in the valleys. Specifically, by excavating numerous small-scale trenches to date earthwork boundary walls as well as estimating size of farm mounds in the aim of exploring what information the farm mound accumulation can give about wealth/size of the farm itself. Dating approaches are largely based on tephrochronology, but also studies on sediment accumulation rates, alongside artefact and structural typology from other work packages will be used when needed.

In the summer of 2022, the focus was given to the Hörgárbyggð area where most of the research took place by trenching the local boundary system. As the experimental methods of searching for heathen burial were found to be too inconclusive to give any firm results that part of the project was not continued in 2022. As previous year experimental 3D modelling was continued and as a result widened out and given more focus this year.

#### ***Dating of the settlement in Hörgárbyggð***

The field season of 2022 took place in June-July with eight field archaeologists (Stefán Ólafsson, Elin Ósk Hreiðarsdóttir, Lilja Laufey Davíðsdóttir, Gylfi Helgason, Samantha Monsen, Agla Ringsted, Jóhanna V. Guðmundsdóttir and Pablo Vaquero). During the season 13 trenches were dug into homefield and property boundaries of selected farms in Hörgárbyggð. The postex of the summer is well on its way and a detailed report of the season will be published in the spring of 2023.

The 13 trenches excavated in 2023 were distributed throughout the whole area, the furthest one to the south (site 03 in Bessahlaðir/Varmavatnshólar) being 36 km south of the furthest to the north (site 08 in Syðri-Reistrará). Most of the sites were centralized within the valleys of Öxnadalur or Skriðudalur (see



figure 1). Two of the sites examined in 2022 turned out to be natural features (site 06 and 13). One sunken boundary at the property marker of two farms (site 03) turned out to be built for irrigation (áveitugarður) in the 18<sup>th</sup>-19<sup>th</sup> century and could not shed any light on the development of property boundaries and ownership in the area. These three sites will therefore not be dealt with in any detail in the text below although a description of them is to be found in the final report of the project.

The remaining 10 sites comprised the core of the field season in 2022. The function of the boundaries excavated in 2022 was partly different from the sites looked at in 2021 as the boundary system in

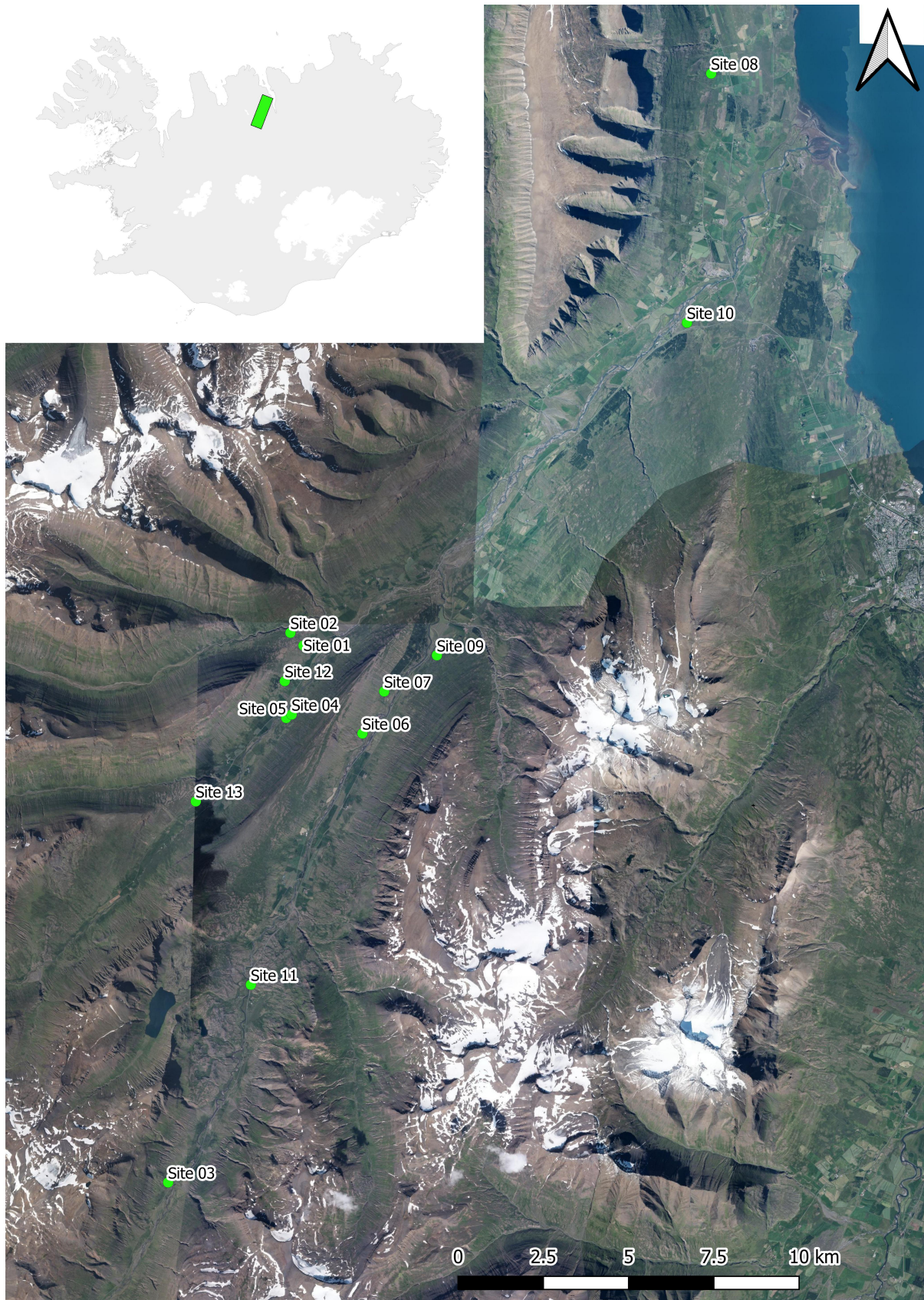


Figure 1.1: Location of trenches excavated in Hörgárbyggð in 2022. Aerial: Loftmyndir ehf.

boundaries in 2021 was more versatile. Much fewer boundaries are visible on surface in Hörgárbyggð, no linear boundaries (that stretch alongside the hillsides) were known in the area and only very few property boundaries. Most of the boundaries excavated in Hörgárbyggð marked homefields around tenant's farms with only one being boundary between farms (trench 05 which was cut into property boundary between the farms Staðartunga and Búðarnes). Most of the boundaries examined were around homefields of smaller tenant's farms but three (site 07, 11-12) were taken into homefield boundaries of larger farms (lögbýli) (see figure 3).

The preservation of tephra in Hörgárbyggð 2022 was overall a little more limited than in Svarfaðardalur the year before. The presence of both tephra from Veiðivötn 1477 and Hekla 1766 was very rare, so in many cases limited information was available about when the boundaries might have fallen out of use. The tephra most frequently found during the excavations was the LNS (the Landnám sequence) and Hekla 1104, both found in seven of the boundaries (LNS in sites 01, 04-05 and 07-10 and H1104 in sites 1-2, 7, 9-12). The youngest layer in the LNS, Veiðivötn from 940 was detected in three of these locations (sites 07, 09-10) and Hekla 1300 in six sites (sites 2, 4-5, 8-10) but tephra from Veiðivötn 1477 and tephra from Hekla 1766 only in one site each (site 11 and site 03).

Site nr	Name	LNS	LNS_940	1104	1300	1477	1766
07	Skjaldarstaðir	P	P	P	A	A	A
09	Kolgerði	P	P	P	P	A	A
10	Hola	P	P	P	P	A	A
01	Kringlugerði	P	A	P	A	A	A
08	Skiptagerði	P	A?	A	P	A	A
04	Sandhólar/Staðartunga	P	A	A	P	A	A
05	Staðartunga/Búðarnes	P	A	A	P	A	A
02	Hálskot	A	A	P	P	A	A
11	Engimýri	A	A	P	A	P	A
12	Saurbær	A	A	P	A	A	A
03	Bessahlaðir/Varmavatnshólar	A	A	A	A	A	P

Figure 1.2: The absent/presence of tephra's the trenches excavated in 2022

The analyzing of tephra was done by Árni Hjartarson. Four of the 10 boundaries turned out to be built after 1104. All these sites (site 01-02, 07 and 11) were homefield boundaries, two of smaller tenant's farms (site 01-02) and two of larger farms (07 and 11). All these boundaries but one (site 07) had two building phases. Some of these boundaries might have been kept up beyond 1300 but in general a lack of later tephra made it difficult to determine when they went out of use.

The other six boundaries examined in 2022 could be older as most of them are built on top of the LNS, often with only small accumulation between the falling of the tephra and the building of the wall, suggesting that it might have been built relatively soon after the fall of the tephra. Two of the boundaries (09 and 10) had preserved tephra from Veiðivötn 940 in the LNS showing that they were built sometimes after 940. The tightest dating information gathered was at Kolgerði (site 09) where the boundary trenched was built after 940 but not kept up/rebuilt after 1104. In most other places the boundaries that had tephra sealing occupational phases were built before 1300 (site 04, 05, 10, 12) as only two of the ten boundaries showed signs of rebuilding beyond 1300 (sites 02 and 08). In others cases boundaries were lacking tephra sealing the building phases, making it difficult to date when they might have fallen out of use. From accumulation rates it seems likely that most of them were not rebuilt much beyond the early Middle Ages but there might be exceptions to this main rule.

Most of the boundaries in Hörgárbyggð showed signs of rebuilding (apart from site 04, 07, 09).

Site nr	Farm	Boundary type	ID	Building phases	Postdates	Predates
01	Kringlugerði	Home field boundary	EY-201:009	2	LNS/1104	?
02	Hálskot	Home field boundary	EY-201:010	2	1104	<1300
07	Skjaldarstaðir	Home field boundary	EY-217:017	1	1104	?
08	Skiptagerði	Home field boundary	EY-086:015	2	LNS	<1300
09	Kolgerði	Home field boundary	EY-238:011	1	LNS/940	1104
04	Sandhólar/Staðartunga	Home field boundary	EY-215:010	1	LNS	1300
10	Hola	Home field boundary	EY-255:017	2	LNS/940	1300
11	Engimýri	Home field boundary	EY-230:007	2	1104	(1300)
12	Saurbær	Home field boundary	EY-202:007	2	<1104	?
05	Staðartunga/Búðarnes	Property boundary	EY-215:027	2	LNS	1300

Figure 1.3: The dating of the trenches of 2022.

The only property boundary trenched in Hörgárbyggð (site 05) was built after the falling of LNS but as the H1104 tephra was not seen in the section it is not known if the boundary predates that layer or not. The boundary was rebuilt once but both phases were built before 1300 and the boundary was not rebuilt or repaired after that.

Dating of boundaries in the inner part Hörgárbyggð suggests that it is likely to have been predominantly built in the 10<sup>th</sup>-11<sup>th</sup> centuries although some of the homefield boundaries, both of smaller and larger farms, were built after H1104 and are therefore dated to 12<sup>th</sup> century or later. The dating of the boundaries in Hörgárbyggð suggests a similar pattern to the one found in Svarfaðardalur although more limited tephra density makes precise dating, especially dating the abandonment phases, harder in Hörgárbyggð. The settlement in the area seems to have been well established in the 10<sup>th</sup>-11<sup>th</sup> century

although some of the homefields boundaries were not built until after 1104. That alone does not determine that these farms were not lived on before that date, only that the homefield was not fenced off until the early 12<sup>th</sup> century. These results are comparable to the once from Svarfaðardalur where a fair number (about half) of the homefield boundaries dated to the 12<sup>th</sup> century (built after 1104), but other types of boundaries were more commonly dated to 10/11<sup>th</sup> century. Further dating, for example systematic dating of the largest farms in the area, could shed a better light on the settlement history of Hörgárdalur.

### *Farm mound assessments*

Another element of the research in the summer of 2022 was the gathering of survey data to enhance our records of targeted farm sites within the study areas of Svarfaðardalur and Hörgárdalur. The aim of the modelling is to estimate the size and scale of selected farm mounds in the area and to test if that can be used as an indicator of inequality, that is if the value of the farm is reflected in the size of the farm mound. The droning and the processing of the imagery in 2022 was in the hands of Gylfi Helgason. In the summer of 2022 altogether 26 farms were targeted for systematic drone photography, 14 in Svarfaðardalur and 12 in Hörgárbyggð (see fig 5 and 6). DJI Mavic drone was used to fly in regular transects at *c* 75 m above sea level and between 80 and 550 overlapping images were taken at each site. The main aim was to collect data about farm mounds from a wide array of farms, both low-valued ones and higher valued ones but also collect data from the farms that were subjected to other research by project's members, (such as Staðartunga, Syðra Tungukot and Kringlugerði).

Name	ID no	Type of farm	Tax value (hdr) 1712	Abandoned by	Farm mound area (m <sup>2</sup> )
Hrísar	EY-100:001	Lögbyli	20		2530
Upsir	EY-109:001	Staður	Unknown	1988	983
Hreiðarstaðir	EY-131:001	Lögbyli	40 (60) <sup>1</sup>		1386
Hreiðarsstaðakot	EY-132:001	Lögbyli	20		1800
Þorleifsstaðir	EY-134:001	Tenant farm <sup>2</sup>	Unknown		1400
Þorsteinsstaðir	EY-142:014	Lögbyli	10	20 <sup>th</sup> c	226
Kot í Svarfaðardal	EY-144:001	Lögbyli	20		1016
Krákustaðir	EY-149:011	Tenants farm	Unknown	Unknown/Well before 1712	770
Syðra Tungukot	EY-149:014	Tenants farm	Unknown	Unknown	308
Kóngsstaðir	EY-154:001	Lögbyli	10	1949	2265
Hverhóll	EY-155:001	Lögbyli	10	1947	2199
Krosshóll	EY-156:001	Lögbyli	20	1935	1822
Kot í Skíðadal	EY-159:001	Lögbyli	10	1926	535
Sæla	EY-162:001	Lögbyli	10	1948	599
Öxnhóll	EY-196:001	Lögbyli	50		800
Sörlatunga	EY-198:001	Lögbyli	20	1964	1219
Féeggstaðir	EY-199:001	Lögbyli	20	1940	1385
Þúfnaveilir	EY-201:001	Lögbyli	30		1700
Kringlugerði	EY-201:009	Tenant farm	Unknown	Unknown	407
Hálskot	EY-201:010	Tenant farm	Unknown	Unknown	507
Ásgerðarstaðir	EY-207:001	Lögbyli	20	1979	1114
Framland	EY-210:001	Lögbyli	Unknown	1921 <sup>3</sup>	1116
Nýibær	EY-211:001	Lögbyli	10	1918	276
Staðartunga	EY-215:001	Lögbyli	30	c 1940	9619
Sandhólar	EY-215:010	Tenants farm	Unknown	Before 1712	770
Kolsgerði	EY-238:011	Tenant farm	Unknown	Unknown	1250

Figure 1.4: Estimated size (m<sup>2</sup>) of farm mounds with abandonment date and tax value from Jarðabók. Further processing of data will produce 3D models and a chance of estimating the cubic meters of farm mounds that can then be compared against tax value.

The processing of the data from 2022 has started but further work will be done in early 2023 with final report planned in the spring/summer of 2023. Some primary results suggest a significant range in scale, for example that farm mounds tenant's farms and small lögbyli (valued at 10 hdr. or less) are on the smaller scale of the spectrum. Farm mounds of many of these farms are most commonly under 800 m<sup>2</sup> but with few exceptions (e.g. Kolsgerði).

<sup>1</sup> The farm is valued at 40, but with Hreiðarstaðakot (20, originally a tenant farm from Hreiðarstaðir), it is valued at 60 hdr.

<sup>2</sup> Originally a tenant farm from Urðir but was made into lögbyli in 1847.

<sup>3</sup> The farm was not established until 1815.

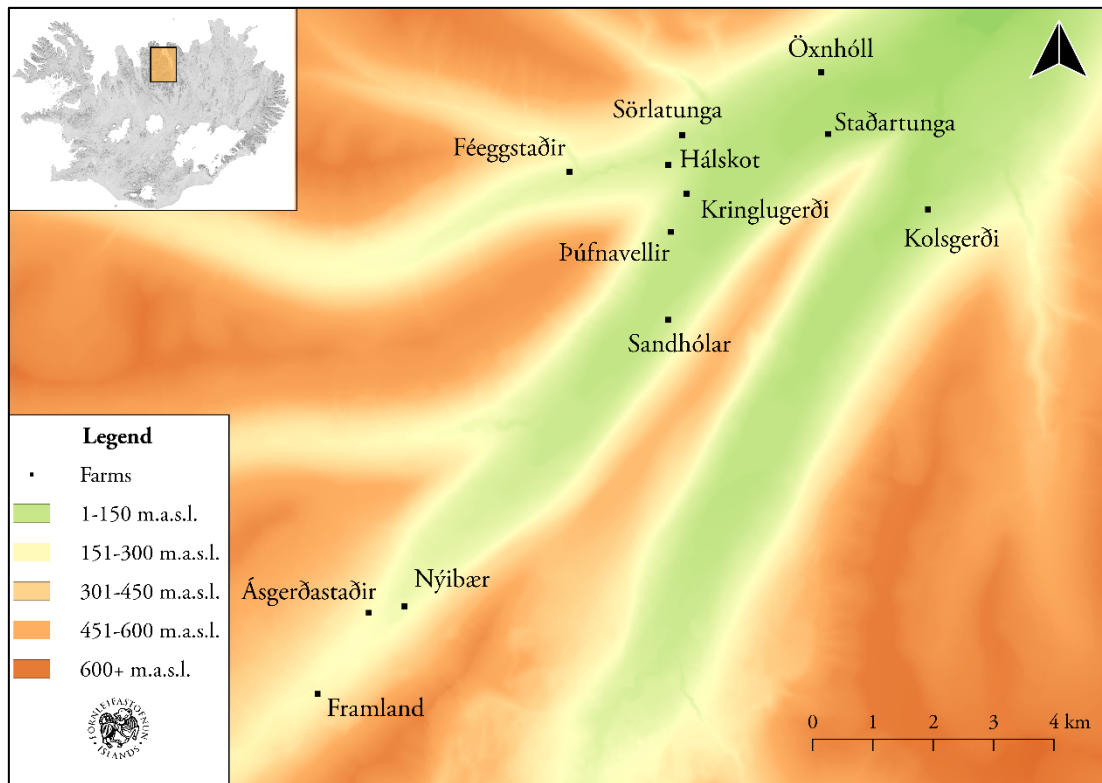


Figure 1.5: Farm mounds examined in Hörgárbyggð in 2022

Different picture emerges when looking at farms valued at 20 hkr. or higher. These farms (apart from Öxnhóll and Upsir where the farm mounds were largely levelled out in the 20<sup>th</sup> century, which without a doubt influenced their size) are generally larger than 1000 m<sup>2</sup> in size, often quite a bit larger. Clearly, Staðartunga (EY-215:001) is an exceptional case and is by large margin, the biggest farm-mound surveyed. In short when looking at the size of the farm mounds in the research area there seems to be correlation between value of the farm and the size of the farm mound. Further work is needed to explore this correlation further, by looking at the cubic sizes of the farm mounds but also by looking more closely at other factors that might influence the accumulation of farm mounds.



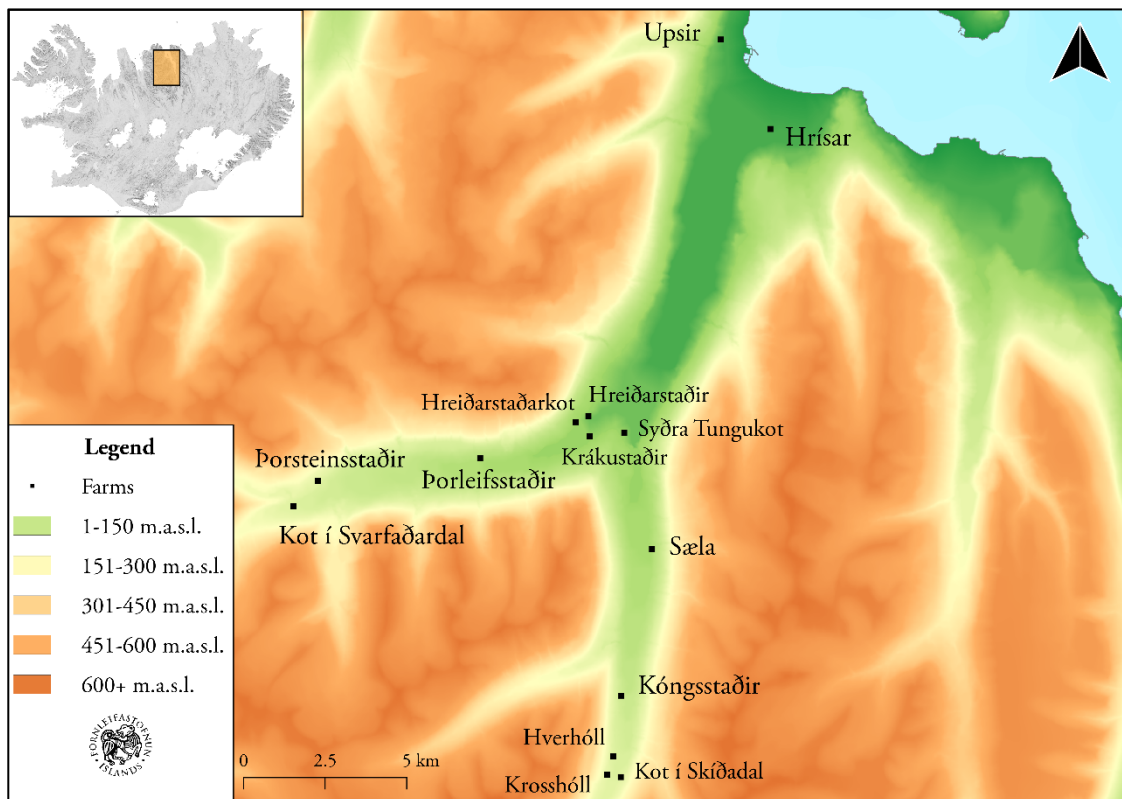


Figure 1.6: Farm mounds examined in Svarfaðardalur in 2022

The preliminary result of farm mound estimates of 2021 and 2022 suggest that drone mapping is a fairly affordable approach to give an indication the scale of (archaeological remains in) farm mounds that could possibly help us advance our ideas about farm values and inequality in the past.

Another aspect of farm mound assessments is planned in 2023. That is to detect signs of desertion periods in farm mounds through accumulation of material. The aim was to examine up to four mounds in the research area to look for signs of breaks in the occupation. This should be done through midden research on farm mounds. If the midden material from farm mound in the research area does not prove substantial enough for this, the focus might have to be widened beyond the research area to excavated midden in the north of Iceland and beyond, that is to explore signs of desertion periods in farm mounds through accumulation of material in selected excavated sites from the period 1200-1600.

## Work Package 2 – Progress report

### **Investigation of economy and settlement chronology in SVARF and HÖRG through farm midden surveys and excavations.**

*Ramona Harrison*

WP 2 consists of a series of farm midden investigations, including both coring and small-scale excavations of selected household refuse collections to address the basis of farm economy, livestock organization and farmers' (predominantly pastoralist) interaction with the environment. Especially when the animal bone remains are well-preserved and the midden layers are undisturbed and therefore well-stratified. In such a situation we can learn more about past human activities such as for example: craft working, farming, resource utilization, access, and restriction; trade and exchange. This can be achieved via faunal analysis on the macro- and the micro-level, with for example: isotope and trace element analysis, tooth microwear analysis, and aDNA analysis.

#### *What was done in the field*

For the 2022 field season, WP2 focused almost entirely on investigating the remains, extent, and contents of what midden remains could still be located from the heavily disturbed farm mound at Staðartunga in Hörgárdalur. The original plan was to place two or more trenches to investigate the level of disturbance of the farm midden over many centuries of farming activity, but in the living quarters and the areas used for household refuse disposal (the midden mound). The proposed strategy was a combination of midden area coring in regular intervals for extent and depth, and to excavate in areas where high bone preservation potential was predicted. This became challenging when half of the team was lost due to covid-19. Only one trench (TR3) could be excavated down to natural deposits, and only a small percentage of the planned coring investigations could be carried out. One extra week in the field had to be added to finish the most urgent task.

Out of a total of 10 sites targeted for midden assessment in Svarfaðardalur, only two could be visited. This forced the WP2 team to plan for a considerably larger field season in 2023 than originally expected.

MA students involved in fieldwork:

In summer of 2022, Alexandra Hajas and Katinka, two of Harrison's MA students from Norway (UiB) participated in the WP2 excavation season. They are both working on MA thesis connected to the Two Valleys Project. Their participation in the field was cut short because they both became infected by covid-19. Both teams went to great lengths to avoid further infections. Though both students recovered and were able to return to the field before their return to Norway, their time in the field was cut short and the extra care required to tend to them slowed the rest of the WP2 field team down considerably.

## Fieldwork

### Svarfaðardalur

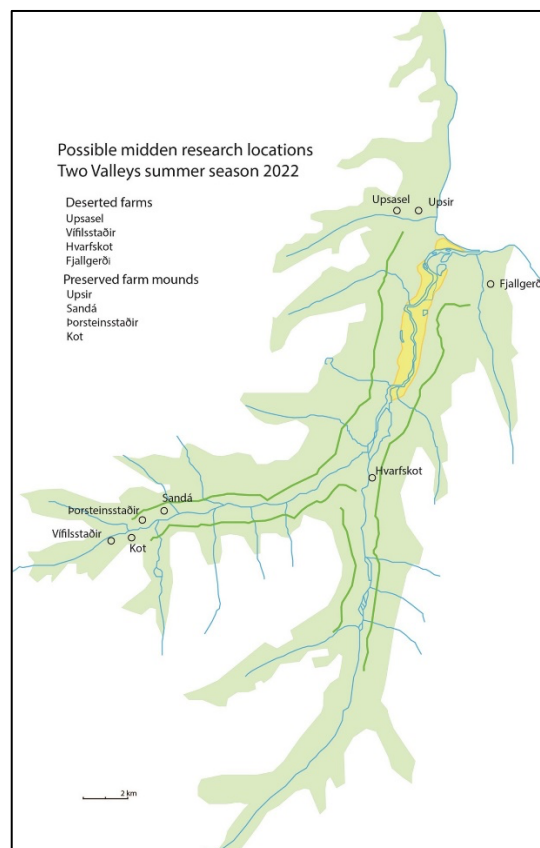


Fig. 2.1. Map of farms in Svarfaðardalur included in the original 2022 midden investigation plan (map credit: Árni Daniel Júlíusson/TVP).

Samtala	Hvað	Jörð	X	Y
EY-215:001	öskuhaugur - Staðartunga	Staðartunga	524920	575028
EY-144:007	öskuhaugur - Fjallgerði	Háls	523939	605385
EY-181:011	öskuhaugur - Klaufabrekknakot	Klaufabrekknakot	511810	596454
EY-141:001	öskuhaugur - Hóll	Hóll	512743	596281
EY-142:010	öskuhaugur - Hvarfskot	Syðra-Hvarf	519342	598640
EY-144:001	öskuhaugur - Vífilsstaðir	Kot	506411	594290
EY-138:012	öskuhaugur - Sandá	Sandá	509256	595943
EY-135:012	öskuhaugur - Þorsteinsstaðir	Þorsteinsstaðir	508306	595540
EY-164:009	öskuhaugur - Kot	Kot	506298	594196
EY-118:001	öskuhaugur - Tjörn	Tjörn	519596	603552
EY-109:001	öskuhaugur - Upsir	Upsir/Dalvík	519555	609146

Fig. 2.2. This list of sites shows the initial plan of investigating a total of 11 farm sites to assess midden research potentials. The only Hörgárdalur site was Staðartunga, where the majority of the time in the field was to be spent. The two Svarfaðardalur sites visited were Hólakot on Hóll farm, and Klaufabrekknakot on Klaufabrekknafarm.



Fig. 2.3 . The two Svarfaðardalur cored in 2022 for an assessment of midden research potential were Hólakot (left picture) and Klaufabrekknakot (right picture).

EY-181:011 - Midden at Klaufabrekknakot (511810/596454)

A series of cores were placed into the assumed midden remains. Unfortunately, no clearly stratified midden layers were documented in the cores.

EY-181:011 - Midden at Hóll (512743/596281)

A series of cores were placed into the assumed midden remains. Unfortunately, no clearly stratified midden layers were documented in the cores.

## Hörgárdalur

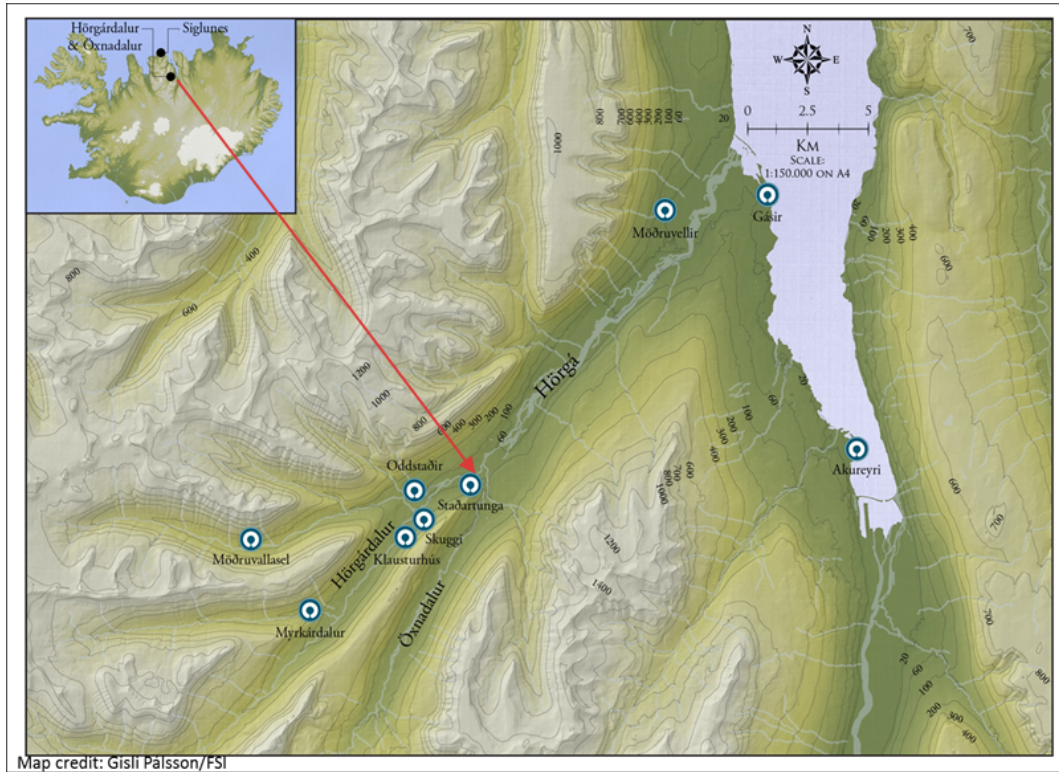


Fig. 2.4. Map of Hörgárdalur research area, with Staðartunga (arrow), Skuggi and Oddstaðir as ongoing research focus sites.

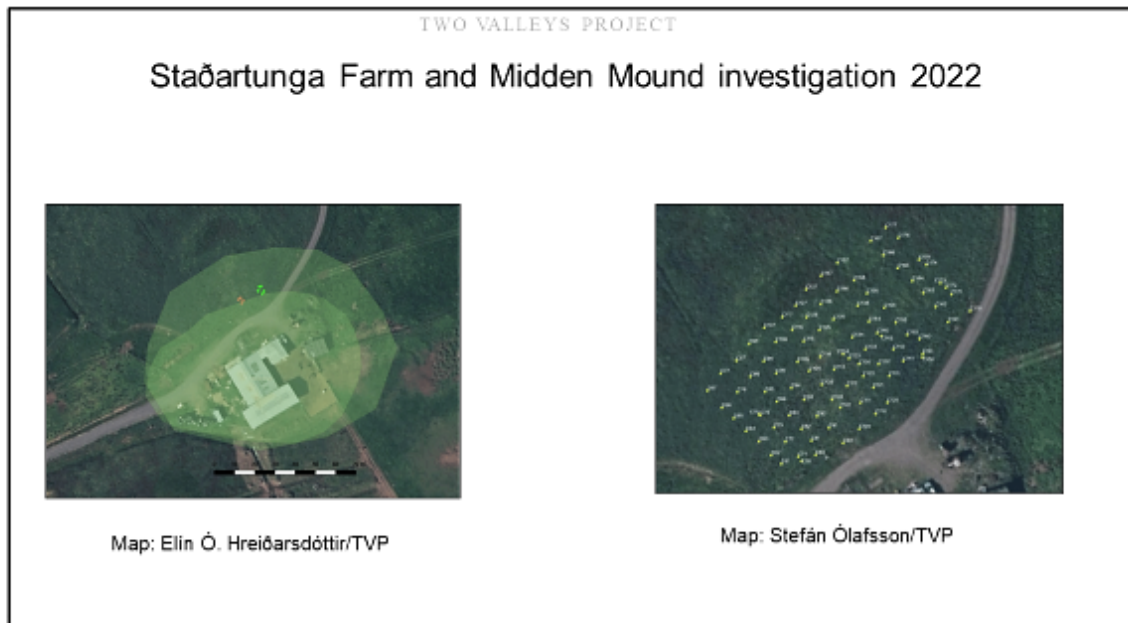


Fig. 2.6. – Staðartunga farm mound and midden area investigation. The left pictures shows an estimate of the largest extent of the farm mound (green shading) and the locations of trenches 3 and 4, (green and orange dots, respectively). The right picture shows the coring grid established in 2022.

#### EY-215:001 - Staðartunga midden coring

Only about 30 % of the planned coring exercise could be carried out in 2022. The remainder will be top priority for the 2023 field season. Upon completion of the midden coring program, the team hopes to use the information to create a sub-surface map of the Stadartunga midden

#### EY-215:001 - Staðartunga TR3 and TR4 chronology

A total of two weeks were used to excavate TR3, which resulted in a 2 m deep, well-stratified trench into cultural deposits. Organic preservation was varied, but almost all cultural layers produced animal bone. In TR3, the team managed to excavate all cultural layers present, with the basal layer documented right on top of the Settlement tephra sequence (V877). Two more tephra layers were documented, sampled, and analyzed by Árni Hjartarson. Those were identified as H1104 and H1300 layers.

TR4 remains were not entirely excavated, because of the complex 20<sup>th</sup> century use and re-use activity in this area. One tephra layer observed in this trench was documented and a sample identified as H1300 tephra. This suggests that in this area, we may have the youngest midden layers, but also potentially the oldest midden layers present. Which provides evidence for

midden use during the entire span of Icelandic Settlement, up to ca. 1938, when the last standing farmhouse built on the original Staðartunga farm mound was destroyed.

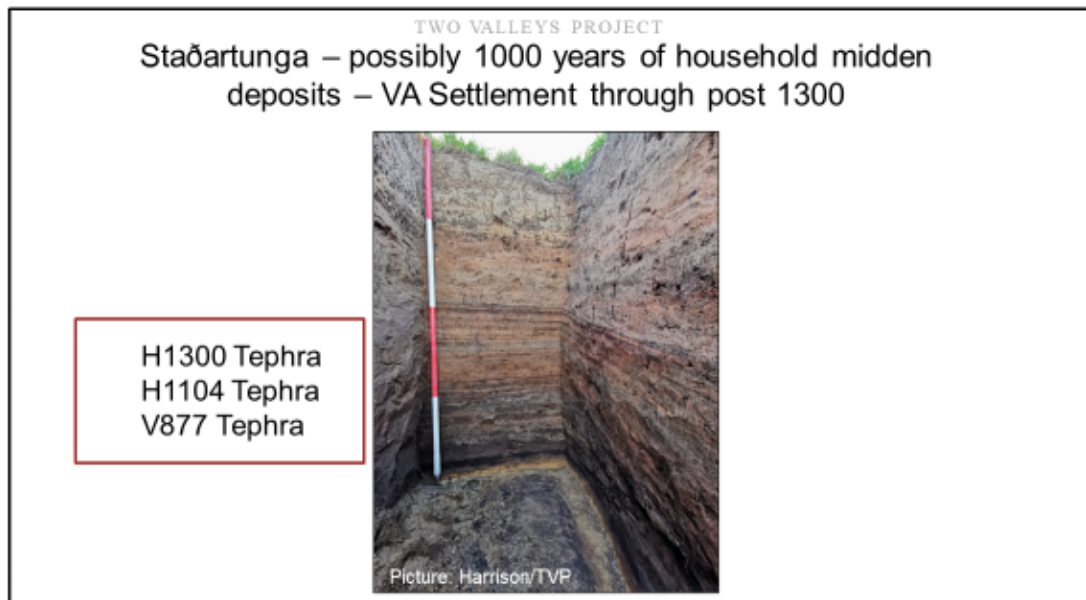


Fig. 2.7. South Profile of TR3 which has clearly defined stratigraphic boundaries and has securely identified tephra layers (Location of text box does not align with tephra layer locations).

#### C14 dates

In collaboration with the SEACHANGE project, eDNA samples were collected by WP1 and WP2 to provide research material for one of the project's PhD students, Emilia Langkjær. Emilia was participating in the field at Staðartunga and the team sampled TR3 and TR4 materials from different cultural layers to be analyzed for potential traces of animal DNA.

As part of this sampling process, SEACHANGE funded radiocarbon analysis on two (2) animal bones, one from context 203 in TR3, and one from context 204 in TR3.

The results were made available by SUERC on 27.1. 23, and are presented in the figure below. Based on the location of this context in the stratigraphy, and the fact that the H1300 tephra layers lies under it, the date has to fall into the 14<sup>th</sup> century range.

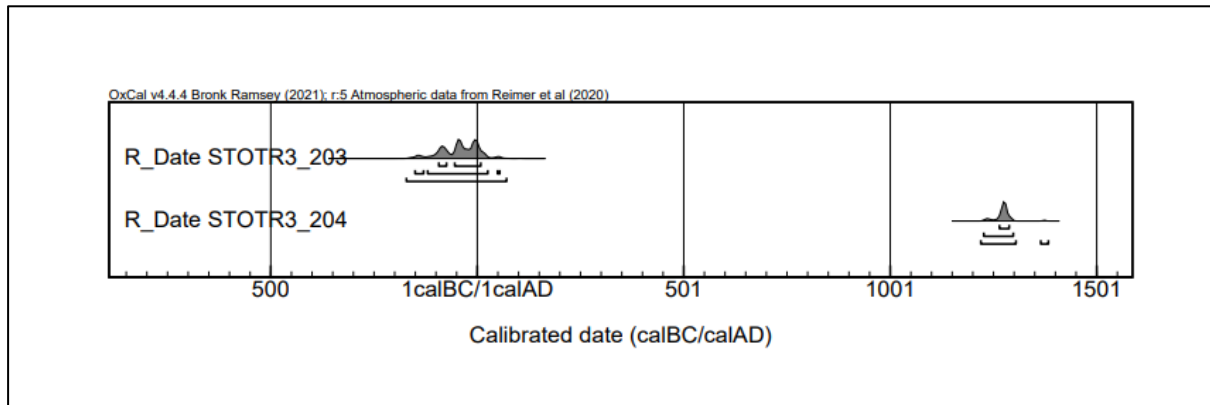


Fig. 2.8. Multiplot of calibrated C14 dates from TR3 contexts (203) and (204). The (203) date is not valid. Based on the stratigraphy and its location above the confirmed H1300 tephra layer, the sample from context (204) dates to post 1300.

*Post-excavation work and field report work:*

All the coring and excavation activities were thoroughly recorded, with the raw data organized into standard databases, and a field report to be written and published in spring 2023.

Below the register of animal bones retrieved both from TR 3 and TR 4. These remains are currently under analysis at the AHKR-UiB zooarchaeology laboratory directed by Harrison.

All the data sets are housed at the internal FSI server where all the fieldwork information carried out in collaboration with WP1 and WP2 is backed-up.

*PhD candidate activities as part of WP2:*

Having co-directed the WP2 field investigations, Kristin Møller-Nilsen was involved in the post-excavation work of all the data for proper data management. Møller-Nilsen presented a poster at the 2022 ICAZ Medieval Working Group conference and has been progressively working on the initial analysis of Staðartunga faunal remains. She has also worked on a sampling strategy for C14, isotopic, and tooth microwear analysis to be carried out by Mainland and Ascough in 2023 and 2024.



## Work Package 3 - Progress report

*Axel Kristinsson*

Árni Daníel Júlíusson formally started the work of WP3 in the Two Valleys project at the beginning of 2022. He had functioned as PI the whole year 2021 and continued to do so in 2022. At the beginning of 2022 he started immediately working for WP3 as one of two historians attached to that work package. The first task was not directly related to the Two Valleys project, but closely related all the same: A graduate course in environmental history at the University of Iceland. The Two Valley project featured prominently in this course with prof. Egill Erlendsson from the TV project participating with a lecture, and the project itself introduced to the ten students attending.

During April and May preparation for participation in the Icelandic Historical Conference 2022 took place. Árni Daníel attended a panel of four historians discussing settlement and its development until 1500. This is a central concern of the Two Valley project and the lecture ÁDJ prepared is intended as a preparation for writing an article for a scholarly journal on this subject. It is also a part of the preparations for writing the historical chapter for the proposed monography/anthology of the project, discussing the main results of the project. This lecture is called „Landnám og byggð um miðbik Eyjafjarðar 880 til 1400“, or Settlement and its development in central Eyjafjörður in 880 to 1400, and it is accessible at the Two Valley website <https://twovalleys.hi.is/wp-3-history-of-the-two-valleys/> . Another lecture was delivered in this context, „Kristnitaka og landnám“, in a conference on settlement studies in Skagafjörður, held at the old bishopric of Hólar í Hjaltadal on the 30<sup>th</sup> of September. Both lectures discussed the various problems encountered when analysing the development of settlement in Eyjafjörður and elsewhere in Iceland.

An important part of the analysis of the history of settlement in the Two Valley area was analysis of settlement patterns with already compiled databases. The collection of a database on the settlement of Iceland was carried out intermittently in April to December, with several separate analyses prepared and carried out. Among these are the organisation of the ancient hreppar (the local communities), the analysis of settlement structure on the basis of available archaeological and historical research and the analysis of the ratio of abandoned farms listed in the Jarðabók Árna Magnússonar og Páls Vídalíns in

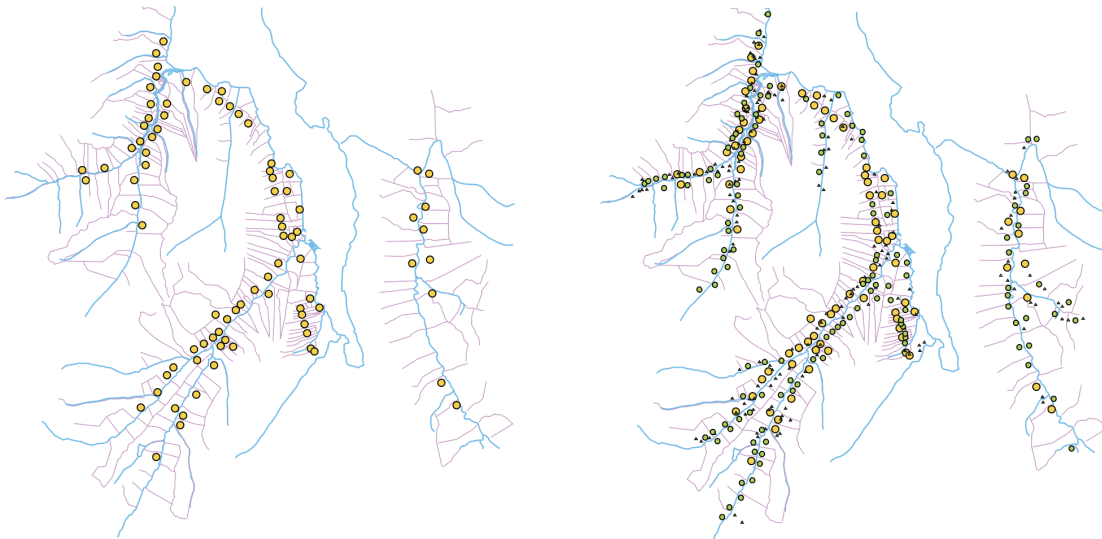


Fig. 3.1. The Two Valley area and Fnjóskadalur. On the left possible farm settlement around 1000 AD, on the right possible farm settlement around 1300.

comparison with the results of the archaeological surveys of Eyjafjörður, Skagafjörður and Þingeyjarsýsla for abandoned farms.

ÁDJ participated as PI in the summer season of the project in Hörgárdalur. In August preparations for the publication of the book *A Tale of Two Valleys* started. The design and layout of the books was in the hands of designer María Árnadóttir. The book was printed in Leturprent in Hafnarfjörður and was ready for distribution in December. This book was written during ÁDJ's tenure as a research fellow at the National Museum of Iceland in 2015-2017, and prepared for publication by Anna Lía Rúnarsdóttir who was editor at the National Museum at the time. Some additional preparations, especially finalising maps and other figures were needed and carried out by the author in September and October. It discusses the available palaeoecological, historical and archaeological research in preparation for a possible research project in the Two Valleys, that became a reality in 2021. The book is thus a useful introduction to a range of issues concerning the Two Valley project.

Progress on Axel Kristinsson's monograph (see Annual Report 2021) has been slow as it is still unfunded. However, most of his work within the TW project supports the monograph and advances research on its subject.

AK published a paper in 2022 called „Voru goðorð arfgeng fyrir 1100 (Were the godords heritable before 1100 AD?)“ (*Saga* 60:2 (2022), 116-144). In it, he demonstrates that there is no reliable evidence for the heritability of godords (chieftaincies) in the early Icelandic Commonwealth and strong indications that they only become generally heritable in the early 12<sup>th</sup> century. This has important implications for power structures in the early Commonwealth and the development of a

social elite in Iceland. It means that the godordsmen (chieftains) didn't own the early godords and their organisation must have been fundamentally different from the patron-client systems they evolved into in the late Commonwealth. The early godords should probably be seen as being organised and controlled by the thingmen (*þingmenn*) themselves, the farmers or householders the membership consisted of. In fact it means that it is quite unnecessary to assume the existence of a significant social elite until the 11th century.

AK also worked on a paper about „creative genealogies“ (*skapandi ættfræði*) submitted and accepted by *Skírnir* in January 2023. Here, it is argued that interest in genealogy only emerged in the 12<sup>th</sup> century in Iceland as a tool used by the emerging social elite to establish its nobility (*göfgi*). There is good reason to doubt the accuracy of genealogies stretching back to and beyond the 10<sup>th</sup> century and examples show that they were still being manipulated in the 13<sup>th</sup> century in the interest of aristocratic families. A new social elite is vulnerable to the slur of being called upstarts and has a pressing interest in creating a past that removes this shortcoming. There is strong evidence that their genealogies invented such a past rather than documented it.

The two contributors to WP 3, AK and ÁDJ are also participating with Viðar Hreinnsson (not a member of the Two Valleys team) on the project Sagas and Retainers. Preliminary results were presented at the Icelandic Historical Congress (Íslenska söguþingið) in May 2022. The project examines the relationship between the retinues of 13<sup>th</sup> century warlords in Iceland which formed large parts of their households and the literature produced in those same households. This work is not a part of the Two Valleys project but connects to it through joint members and related research.

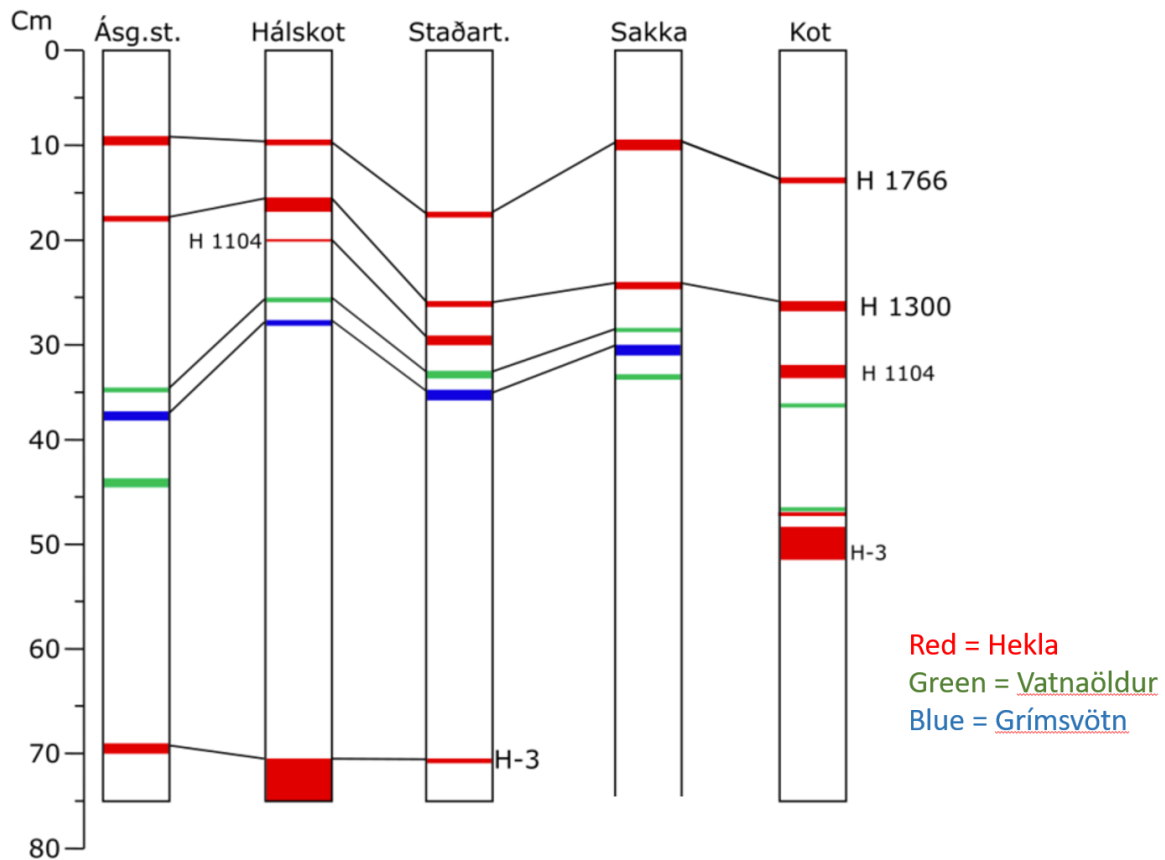
## Work Package 4 - Progress report

### WP 4: Main results:

**Fieldwork of WP4:** Participants in the fieldwork were Egill Erlendsson (WP4 leader) and Elísabet Ásta Eypórsdóttir. The fieldwork centred upon securing samples of organic soil (peat) from the Hörgárdalur area. The strategy was to collect those samples across a socially hierarchical (class) and altitudinal transect. This was achieved. A peat monolith sample from the farm *Staðartunga* in the lower, northern reaches of Hörgárdalur. Staðartunga is representative of a farm that is believed to have been of a high social standing from the onset of landnám. A second peat monolith sample was accrued from the abandoned farm *Ásgerðartaðasel* in the upper, southern reaches of Skíðadalur. This peat monolith will represent the environmental footprints of a lower-social level, (sub)tenancy-based household or a shieling site, later transformed to a full-year occupation. A third peat monolith sample was taken from *Hálskot*, located geographically between Staðartunga and Ásgerðartaðasel and completes the altitudinal transect along the valley system. As primarily an outfield grazing area, the Hálskot site is believed to be the most responsive to changes in magnitude and nature of historical land-use. As such it is probably an area most likely to reflect land use change in response to the Black Death impact. The three samples and sample sites complete and fulfil the proposed sampling for WP4 for the year 2022. All the profiles were sampled to sufficient length (depth) to capture the whole historical period and to extend sufficiently long back into prehistoric stratigraphy. The fieldwork for WP is complete. Added to that is the access to lake sediment sequences, and data arising from those, from Tunga and Urðir, attained via EE's collaboration with the "ROCS" project (<https://rocs.ku.dk/>).

**Sedimentary analyses for WP4:** High resolution sedimentary analysis of historical contexts provide two crucial types of information: 1) The conditions of land surfaces at any given point in time over the study period and 2) indications, through anomalies (chemical peaks) in soil geochemistry, about cryptotephra layers (concentrated shards of tephra that do not form visible horizons in stratigraphies). The latter goes beyond what was proposed in the project proposal. New collaboration (not foreseen at the time of the proposal) has opened the door to undertake XRF core scanning. This new collaboration has also allowed for sedimentary analysis to take place at a much higher resolution than proposed. All the three samples collected in 2021 were taken to the Globe Institute, University of Copenhagen, DK where they were analysed at high resolution (every mm) soil geochemistry and (at every 4 mm) magnetic susceptibility. The samples that were collected this year (2022) were to be subjected to the same analyses in 2022, but this had to be postponed. XRF and magnetic susceptibility measurements on samples collected in 2022 will be conducted in March 2023.

**Geochronology for WP4:** Geochronology is of crucial importance to WP4, in which tephrochronology is central. Although we await the results of the sedimentary analyses on the peat profiles collected in 2022, we have performed an initial geochemical analysis on visible tephra horizons in those profiles, all three 2022 samples have been sampled for visible tephra horizons. In total 18 samples were processed and analysed for geochemistry. Further subsampling for tephra is anticipated following XRF and magnetic susceptibility measurements in March 2023. The results of the initial analyses are quite promising. It is clear that each of the three samples can be furnished with a robust geochronological framework. Importantly, all three sample sites share a suite of confirmed tephra layers of known age which can be used to securely correlate social (e.g. landnám, Black Death) and environmental events, processes and changes between the three study sites, and the study sites in Svarfaðardalur. All samples allow for the constraining of temporal extent by the presence of the Hekla-3 tephra layer (ca. 1000 BC) and a Hekla tephra layer from AD 1766. In addition, all three sites allow for the stratigraphic placement of landnám to be identified, existence of one or two of Vatnaöldur tephra layer(s). Further two tephra layers of medieval age, Hekla tephra layers from AD 1104 and AD 1300 are found in two or all of the 2022 profiles (see picture below). We expect further improvement of the tephra stratigraphy and chronology following the XRF analyses. It is therefore clear that all the sites can be provided with an excellent tephra-based timeline for the medieval period, which is the period of primary interest here. A further result of the tephra work is the existence of a Grímsvötn tephra, immediately below a Vatnaöldur (Landnám sequence) tephra. The almost consistent observation of the Grímsvötn tephra in the profiles helps constrain the landnám period in the peat.



**Pollen analysis for WP4:** The pollen analytical work is the cornerstone of WP4, and is intended to provide the bulk of data on which Elísabet Ásta Eyþórsdóttir's PhD work will build. Datasets are now complete for both the sites Sakka and Kot in Svarfaðardalur. 27 pollen samples from each site draw a picture of environmental processes at each farm, from before settlement until 1766. The pollen data complete the suite of datasets on which the first paper of Elísabet Ásta's PhD thesis will be based, the other coming from sedimentary analyses and geochronology.

## Work Package 5 - Progress report

### **The Hazardous Landslides in West and North Iceland in November 1390 – Excavations in the Landslide**

*Árni Hjartarson & Sveinn Brynjólfsson*

More catastrophic landslides have occurred in Hörgárdalur than in any other inhabited valley in Iceland at least in respect to death toll. Altogether 46 fatal accidents caused by landslides are recorded there since the early 14. century and many farms have been destroyed (Sveinn Brynjólfsson et al. 2016). Svarfaðardalur and Hörgárdalur differ in this respect. No fatalities are documented in Svarfaðardalur and only one or two farms have been destroyed by landslides in this period.

One of the most fatal landslide weather in Iceland's history hit the West and the North in November 12-17th 1390. At least 34 people died. Three ancient annals mention this event, Flateyjarannáll, Lögmannsannáll and Gottskálksannáll. They compare fairly well but the description in Flateyjarannáll is the best and most exact.

*Annals of the Flatey Book 1390 and 1391.* „Torrential rain occurred in the fall after St. Martin's Mass (Nov. 11<sup>th</sup>). The floods were so great that no one remembered anything similar. Sheep perished on a large scale in many places, for example Skagafjörður and in Desey, Norðurárdalur. Landslides took place almost all over the country, destroying forests, meadows, fields and crops. The entire farm in Hjallaland in Vatnsdalur was desolated, six people died. No one in the farm escaped. The farm Búðarnes was also ruined. There 12 individuals were killed but one survived in the rubble....

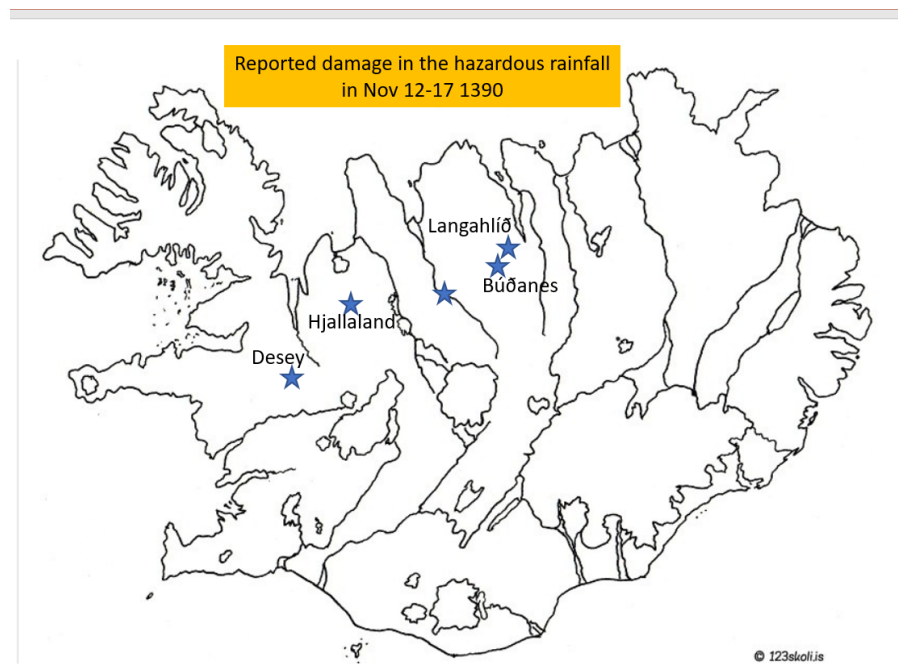
The whole manor house in Langahlíð was swept away along with the church. There 16 people died but two women and a man working in the cow stall escaped. Two boys were found alive in the landslide the following morning. Among the dead was the lawman Hrafn Bótólfsson, his wife Ingibjörg Þorsteinsdóttir and their two children, Þorsteinn kusi and other locals. The body of the landlady was found in the next morning. .... Almost nothing could be saved from the scree even though more than 100 people participated in the search. Some cattle were killed and hay was destroyed. This event occurred Thursday evening before Clementine Mass“ (that is 17th Nov.). (Islanske annaler bls. 416-417)

1391. „The body of lawman Rafn Bótólfsson was found and brought to Hólar where he was buried“. (Islanske annaler bls. 417)

The farm was not rebuilt until many years later, unknown how many, and then under a new name, Skriða, as it is called today. Skriða simply means „a scree“. The new name appears already in a document from 1461. The house was built some hundred meters northeast of the original site.

**Table 5.1.** Documented casualties in Hörgárdalur caused by landslides

Year	Number of dead	Place
1337	7	Myrkárdalur
1390	16	Langahlíð (now Skriða)
1390	12	Búðarnes
1769	3	Öxnhóll
1795	2	Langahlíð innri
1805	5	Nýjibær
1887	1	A public domain in Selárdalur
	<b>46</b>	



*Fig. 5.1. Reported damage in the hazardous weather in November 12 to 17 1390*

### Ingibjargarsteinn

Exact location of the ancient buildings, that is the residence, church and the cowstall, is unknown. The story says that the large rock, Ingibjargarsteinn, originally came along with the landslide that ruined Langahlíð farm. A rescue team found the body of the landlady, Ingibjörg Þorsteinsdóttir, close to it.



Her hand stood out from the scree and was immediately recognized by the ring she wore (Ólafur Jónsson 1957). According to this the residence house in Langahlíð was there close by. The original rock was removed and used in bank defence structure at Hörgá river several decades ago. Later it was replaced and a similar rock was placed not far from the old rock's location. The name Ingibjargarsteinn may be young, it first appears in the placenames description by Jóhannes Óli Sæmundsson and it is possible that he himself might have given the stone its name. The farmer in Skriða states that the current cowstall of the farm is situated in the same site as the older cowstalls of the farm, may be all through history.

Halldór G. Pétursson (2022) has doubts about this location. The mountain above is gently sloping and there are no definite manifestations of landslides to be seen. The landslide risk is much higher several hundred meters to the south.

Before the grass field around Ingibjargarsteinn was ploughed smooth, as it is today, it had channels and grooves that were said to have been left by the rescuers who dug in the landslide mass after the accident searching for people and things. The best images of the area, as it looked like in former times, are oil paintings made by Sverrir Haraldsson, the old farmer in Skriða (born 1941). The rescue digging seem to have started immediately after the accident and then most of the bodies were found. Over the winter no digging could be performed due to snow and frozen ground. The next summer the search started again and then the lawyer Hrafn Bótólfsson was found. The location of the church and churchyard that the landslide swept away is unknown, but it was probably close to the house.

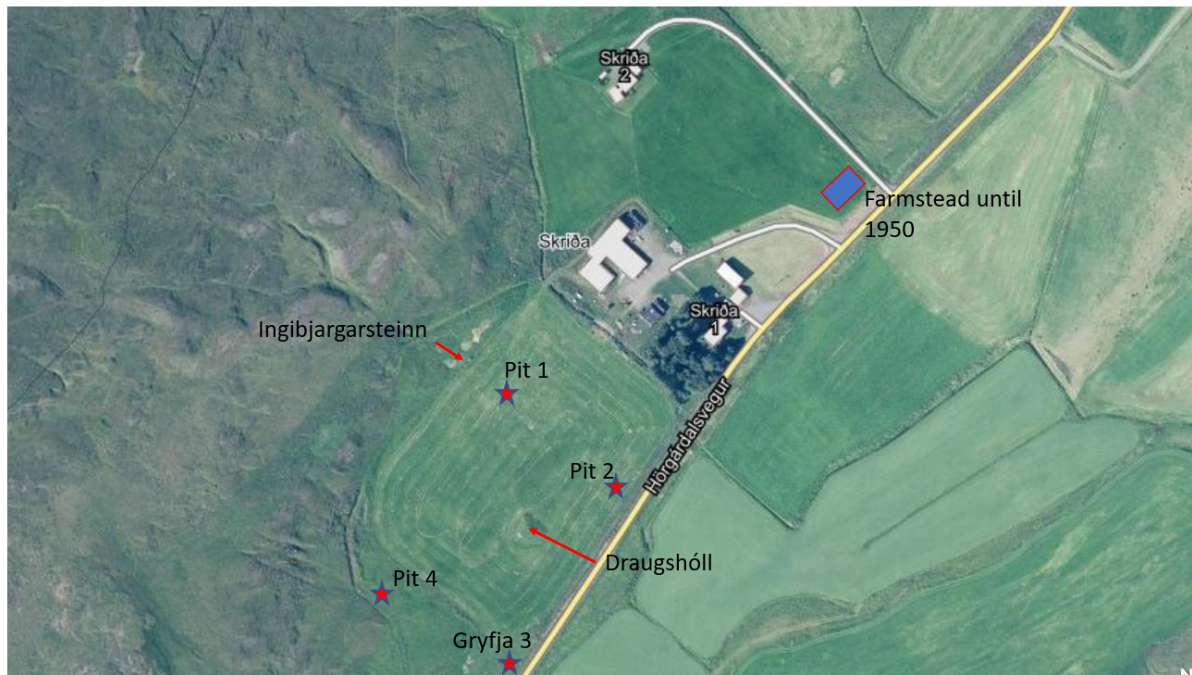


Fig. 5.2. The location of the observation pits in Skriða / Langahlíð ytri.

**Table 5.2.** Survey pits in Hörgárdalur in August 2022

Pit no.	X	°W	Depth m	Notes
1 Skriða	528991	580212	3,2	Near Ingibjargarsteinn
2 Skriða	529096	580131	2,3	
3 Skriða	529027	580041	2,12	SE-corner of the meadow
4 Skriða	528923	580098	3,1	SW-corner and the uppermost part of the meadow
1 Búðarnes	521029	570362	2,4	Near the old Sheephouse
2 Búðarnes	521040	570401	2,2	The slope up from the residence house
3 Búðarnes	520819	570227	2,9	In the meadow 200 m south from the farm
1 Gáseyri	538560	587715	2,0	
2 Gáseyri	538321	587912	1,4	
3 Gáseyri	538219	588111	1,2	
4 Gáseyri	538137	588504	1,5	

### Exploratory excavations in the summer of 2022

The WP5 plan for the Two Valleys Project in the summer 2022 was to investigate three places in Hörgárdalur in order to get better ideas about the hazardous events in 1390. Three sites should be

investigated by excavations, that is Skriða, Búðarnes and Gáseyri, using bacho tractor able to dig 3-4 m deep observation pits. It was decided to start the exploratory digging in the summer of 2022 in Skriða, nearby the original site of Ingibjargarsteinn rock to realise if remains of a historical landslide could be found in the soil and even some remains of the lost farm Langahlíð. Four observation pits were located in the meadow (fig 3). Here after the soil profiles of the pits will be described.

### **Observation Pit no. 1.**

0-35 cm Disturbed soil without visible tephra layers.

35-120 cm. A scree, rather coarse, mixture of sand, gravel and pebbles and cobbles up to 18 cm across. Dark grey material, mostly without soil, a few patches of turf were found. No stratification.

120-170 cm. The same scree more mixed with soil and more brownish in colour. Cobbles up to 16 cm across. Undulating bottom.

170-174 cm. Clean brown soil. Erosion marks are found on the surface of the layer caused by the landslide. In some places it has eroded away all the soil layer and the H1300 layer.

174-175 cm Black tephra, 1 cm thick. H1300. (Sample 1)

175-186 cm. Brown soil.

186-186,5 cm. Light grey band, 0,5 cm thick. Aeolian (Sample 2)

186,5-202 cm. Soil with thin dark band, probably aeolian dust. (Sample 3)

202-205 cm. Soil with black spots of charcoal. The layer is seen in all walls of the pit. (Sample 4)

205-229 cm. Turf construction 24 cm thick, scattered with cobbles up to 9 cm across.

229-236 cm Black, disturbed tephra 6 cm thick.

236-246 cm H3 light coloured tephra, 6-10 cm thick.

246-290 cm. Soil

290-320 cm. Till

320 cm. Bottom

### **Observation Pit no. 2.**

0-30 cm. Disturbed soil without visible tephra layers.

30-105 cm. A coarse scree, mixed with soil, 75 cm thick. Brownish in colour. Boulders up to 60 cm across. No stratification.

105-112 cm. Soil with small patches of black charcoal + light grey and reddish ash

112-113 cm Black tephra, H1300, is seen in all walls of the pit. (Sample 1).

113-118 cm. Soil with cultural ash patches.

118-130 cm. Cultural layer, stratified with grey, black, with light coloured patches. (Sample 2)

130-142 cm Soil with charcoal.

142-150 cm. Disturbed soil with remains of the H3 tephra.

150-170 cm. Reddish soil.

170-192. Soil with some stones.

192-230 cm. Fluvial gravel, rounded cobbles up to 12 cm across.

230 cm. Bottom.

### **Observation Pit no. 3.**

0-35 cm. Soil

35-95 cm. Landslide 60 cm thick, muddy

95-100 cm. Soil

100-100,4 cm. Tephra (?), dark brownish, 4 mm thick. (Sample 1)  
100,4-102 cm. Soil.  
102-103 cm. Black tephra, H1300?. (Sample 2)  
103-113 cm. Soil  
113-113,5 cm. H1104 light grey tephra 4-5 mm.  
114,5-145 cm. Soil  
145-149 cm. H3 with thin black tephra (?) layer on top in some places.  
149-156 cm. Soil  
156-166 cm. Soil mixed with stones, scree or debris avalanche.  
166-177 cm. Reddish soil.  
177-192 cm. Stony soil.  
192-212 cm. Fluvial gravel.  
212 cm. Bottom.

#### **Observation Pit no. 4.**

0-55 cm. Soil without tephra layers.  
55-160 cm. Coarse, heterogeneous scree, mixed with soil, 105 cm thick. Boulders up to 65 cm across. No stratification.  
160-260 cm. Same scree, coarse and heterogeneous material, reddish because of bog iron, more of sand and gravel and less of soil than in the upper layer. Boulders up to 65 cm across. No stratification. Inflow of groundwater.  
260-310 cm. Same scree, somewhat smaller grain size than in the upper layers  
310 cm. Bottom.

#### **Discussion and conclusions about Langahlíð**

The landslide that occurred in 1390 and destroyed the ancient manor Langahlíð was found in the meadow west of the farm Skriða. There it appeared in all four of the observation pits below 30-55 cm thick layer of soil. The thickness of the scree varied from 60 cm to > 250 cm. The tephra layer H1300 was found below the scree. Tephra layers show that a small hillock in the meadow, Draugshóll (Ghost Hill), was not overflowed and formed an island in the landslide. Below the landslide remains of human activity were discovered in pits 1 and 2.

In pit 1 a cultural layer with charcoal, ash and turf were found below the H1300 tephra layer. The turf forms 24 cm thick layer irregular construction, scattered with cobbles. No tephra was seen in the turf. This layer is 27 cm below H1300 and resting directly on H3. This position indicates high age of the turf construction (~10<sup>th</sup> century). The H3 layer is double, the upper part is black but the lower part is white with yellowish hue.

In pit 2 charcoal and ash layers were found directly below the scree in both sides of H1300. These cultural layers are 27 cm thick altogether, resting directly on disturbed soil mixed with H3.

In pits 3 and 4 no manifestations of human activity appeared. In pit 3 undisturbed soil with both H1300, H1104 and H3 appears below the scree. In pit 4 the tractor didn't manage to penetrate through the scree.

The main buildings in Langahlíð may have been located in the meadow ca. 150 m west of the recent house in Skriða, near to original site of Ingibjargarsteinn rock. If so, then this is in line with old legends that state that the farmstead was situated in this area and opposes ideas about different location of the farm and the landslide (Halldór G. Pétursson 2022). The thickness of the slide near Ingibjargarsteinn is about 150 cm. The landscape shows that the landslide must have had its origin in the gently sloping slope up from the farm. Surface manifestations of the slide, such as scars and flow paths, are very diffuse. The cause and triggering mechanism of the landslide was extended and intense rainfall.

The 1390 landslide seems to have been a single event in this site, no indications of another Holocene landslides in this area were found. Several hundred meters farther south remains of recent landslides are on the other hand prominent.



*Fig. 5.3 Búðarnes and the observation pits.*

## **BÚDARNES**

Búðarnes is a large dairy farm in the upper Hörgárdalur. As already mentioned, annals state that the farm was ruined by a terrible landslide in November 1390 when 12 individuals were killed. One

survived in the rubble. Nothing is mentioned about the fate of the animals and outhouses nor how long the farm was abandoned after the hazardous event.

Ólafur Jónsson 1957 says that the ancient farmstead is believed to have been where the current sheep house are located. The Búðarnes dwelling houses have been located in just about at the same site through the ages, perhaps since it was rebuilt after the accident. According to that the new house was only moved a short distance from the original farm. Three observation pits were dug and surveyed in Búðarnes. Two of them in the area where the ancient dwelling houses was supposed to have been located and one farther south to try and estimate the size of the landslide.

#### **Observation pit no. 1. South side.**

0-30 cm. Stony soil without visible tephra layers. Some stones and boulders are visible at the surface.

30-90 cm. A heterogeneous landslide, mixed with soil, the thickness is uneven, 30-60 cm thick.

Largest boulder, 105 x 55 x 30 cm each side. No stratification.

90-104 cm. Soil

104-116 cm. Cultural layer, disturbed soil, turf with tephra, charcoal, ash, dark and light coloured.

(Sample 1 charcoal, sample 2 dark tephra H1300)

116-126 cm. Soil.

126-127 cm. Black tephra, 8-10 mm thick, continuous in all the walls but the east side of the pit where the landslide has swept it away. (Sample 3, black tephra, H1300)

127 cm. Light tephra, 0-2 mm thick, discontinuous lenses (H1104).

127-141 cm. Silty soil.

141-166 cm. A landslide, 25 cm thick, stones up to 10 cm across

166-170 cm. Soil.

170-250 cm, Till.

250 cm. bottom

#### **Observation pit no. 2.**

0-25 cm. Soil. Boulders visible at the surface.

25-26 cm. Black tephra with lighter spots Vv1477? (Sample 1)

26-30 cm. Soil.

30-32 cm. Ash, black, light grey, orange. (Sample 2)

32-50 cm. Sandy soil.

50- 95 cm. Landslide, thickness uneven 5-45 cm, thinnest in the north wall of the pit. Boulders up to 23 cm across.

55-110 cm. Soil

110-111,5 cm. Black tephra, 15 mm thick (Sample 3)

111,5-125 cm. H3, yellowish, 140 mm thick.

125-140 cm. Soil.

140-142,5 cm. H4?, 25 mm thick

142,5-160 cm. Pure soil.

160-220 cm Till.

220 cm. Bottom

#### **Observation pit no. 3.**

0-25 cm. Soil without visible tephra layers.

25-130 cm. Coarse, heterogeneous scree, mixed with soil, 105 cm thick. Boulders up to 65 cm across. No stratification.

130-137 cm. Soil, greyish

137-138 cm. Black tephra layer, 8mm thick, continuous. (Sample 1, H1300)

138-157 cm. Silty soil.

157-167 cm. A sandy black layer with white spots and patches 7-10 cm thick. (Sample 2)

167-221 cm. Soil with wooden trunks up to 6 cm across. Sandy soil lenses

221-224 cm. H4, white grey, 30-40 mm thick.

224-290 cm. Pure soil without visible tephra layers and trunks.

290 cm. Bottom

### Discussion about Búðarnes

The 1390 landslide was recognised in all three of the observation pits in Búðarnes below ca. 25 cm thick layer of soil. In pit no.1 cultural layers were revealed below the 60 cm thick landslide, disturbed soil, turf scraps with tephra lenses, charcoal and dark and light-coloured ash. The tephra lenses in the turf seem to be H1300. Below these layers are 10 cm of soil and then comes the tephra layer H1300 in situ. Below it was c. 14 cm of pure soil and then 25 cm thick landslide of unclear age, possibly historical.

In pit no. 2 the Veiðivötn tephra Vv1477 was found above the landslide and also ash in different colours, black, light grey and orange. The landslide itself had uneven thickness in the pits sections, 5-45 cm, thinnest in the north side of the pit. Below it no signs of human activity were seen but soil layers with H3 and H4.

In pit no. 3 the landslide is over 100 cm thick. There the H1300 tephra is found 7 cm below the bottom of landslide. No cultural layer was found. Wooden trunks up to 6 cm across indicate a prehistorical forest little younger than H4 that was seen there below

Cultural manifestations in pit no. 1 indicate that there was human occupation nearby, as old legends claim (Ólafur Jónsson 1957 Ólafur Jónsson og Halldór G. Pétursson 1992). The decreasing thickness of the landslide in pits 1 and 2 may indicate that its margin is close by. The ancient house may therefore have been near the northern margin of the landslide. According to that the new house was rebuilt just a little outside of the landslide, only 100 m north of the old site. The landslide seems to have been wide and has reached some hundred meters to the south. In pit no. 3, 200 m to the south, it is over 1 m thick with large boulders. There the landslide has reached Hörgá river.

Many landslides have taken place near Búðanes. In a report about landslides in Hörgárdalur Sveinn Brynjólfsson et al. 2016 (bls. 75) list up 33 landslides big and small in the slopes of Staðartunguháls.

## GÁSEYRI

**Gásir** was the main trading harbour in Northern Iceland during the Middle Ages, and is mentioned many times in ancient annals from the 13th and 14th centuries and Sturlunga saga. Archaeological excavations in the area have shown that the trading activity declined at the end of 14. Century and after 1400 it is rarely mentioned and the trading seems to have moved to Akureyri. According to Halldór G. Pétursson 2022 the harbor was possibly ruined and partly filled up by catastrophic flood in Hörgá river following the hasardous weather 1390. The manifestation of this is seen in flood deposits in the Hörgá river delta where soil, turf and wooden truncks make up the majority of the materal

Four observation pits were dug in the southern part of Gáseyri in order to find out the composition of the fluvial material. The coordinates are given in table 1. All the pits were rather shallow, the tractor was not able to dig deeper. No deposits related to catastrophic flood were found in this part of the delta only more or less pure and black basaltic sand. This does not disprove Halldór G. Pétursson's theory but calls for more research in the area.

## References

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- Halldór G. Pétursson 2022. „Skriðuföllin í Hörgárdal árið 1390 og afdrif Gásakaupstaðar.“ *Heimaslóð* 19. hefti, bls. 5-39.
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- Sveinn Brynjólfsson, Brynjólfur Sveinsson og Halldór G. Pétursson 2016. *Könnun á ofanflóðaaðstæðum í Öxnadal og Hörgárdal.* Veðurstofa Íslands VÍ 2016-009.



## Work Package 6 - Progress report

Preliminary work on this package has finally begun. The plan was to find an MA student for this task last winter, but that did not prove possible. Instead, a student was found in the autumn.

The student in question is Sólborg Una Pálsdóttir. She is at present the head of the Municipal Archives of Skagafjörður. She has experience from both archaeology and history and because of that is an ideal candidate. Dr. Guðný Zoëga from Hólar University has agreed to co-lead Sólborg Una in her MA-thesis along with Árni Daniel Júlíusson. The MA-project remains to be approved by the University of Iceland.

## Milestones reached

All packages

A Two Valleys project meeting was held in Reykjavík on the 25<sup>th</sup> of November, attended by Axel Kristinsson, Árni Hjartarson, Árni Daníel Júlíusson, Elísabet Ásta Eyþórsdóttir, Elín Ósk Hreiðarsdóttir, Egill Erlendsson, Kristin Møller-Nilsen, Stefán Ólafsson, Sólborg Una Pálsdóttir and Sveinn Brynjólfsson. Each participant presented the results of their work so far.

Árni Daníel Júlíusson presented a lecture about the project at the NABO workshop, Reykjavík on the 29<sup>th</sup> of September 2022.

### WP 1

Two members of WP1 participated in the project meeting on the 25<sup>th</sup> of November 2022 (Elín Ósk Hreiðarsdóttir and Stefán Ólafsson), giving talks about the results of the year. Additionally, members participated in an open event on selected sites in Hörgárbyggð in early July where the aims and first results of the project were introduced to the public during an evening field walk. The members also contributed to the general outreach of the project through the Facebook page of the project.

Work package 1 produced a detailed field report for the summer season of 2021 in the summer of 2022. It is accessible at the project website <https://twovalleys.hi.is/wp-1-settlement-investigation/>.

### WP 2

Harrison and Roberts have collaborated on a peer-reviewed research article called: “*Skuggi Landnám Farm and Site Economy in Transition: An Assessment of the Structure A and Household Midden Remains from the Viking Age to the Medieval Period.*” This article is based on research done in Hörgárdalur and is directly connected to this project as it discusses both household and midden remains within the property of Staðartunga farm. The article was published in December of 2022.

A detailed field report for the summer season of 2021 was presented for Work Package 2 and is accessible at the project website, <https://twovalleys.hi.is/wp-2-farm-midden-investigation/>.

In Fall of Harrison presented the WP2 and Two Valleys Project at three conferences:

EAA Annual Conference, Hungary, 31.8. – 3.9. 2022. Session title: Above and around 60 degrees North: movement of ideas, practices, materials and people AD 300-1300

Ramona Harrison: *Medieval Movements along the Fjord and Beyond in Arctic Iceland.*

This contribution will be adapted to the resulting contribution to a special Brepols Volume called: *Harvesting the Margins of the Viking World*.

- ICAZ Medieval Working Group Conference, Bergen, 28<sup>th</sup>. – 30<sup>th</sup>. September 2022 (co-organized by Harrison).

Ramona Harrison, oral presentation: *Scales of regional zooarchaeology in medieval Iceland*

**Kristin Møller-Nilsen** (& Ramona Harrison), poster presentation: *Medieval Zooarchaeology at Staðartunga farm in Northern Iceland. Establishing research protocol*.

<http://www.alexandriaarchive.org/icaaz/workmedieval>

- Human Agency and Global Challenges: Re-Centering Social Change in Archaeology, Bergen, 15<sup>th</sup>. – 17<sup>th</sup>. of September, 2022.

Ramona Harrison, Árni Daníel Júlíusson (Bergen, Reykjavik): *The mechanisms of social change in medieval Iceland: A regional case study in Two Valleys*

(<https://www.uib.no/en/rg/materiality/145610/human-agency-and-global-challenges-re-centering-social-change-archaeology#saturday-17th-nbsp-september>)

### WP 3

Publication of Axel Kristinsson's "Vorur goðorð arfgeng fyrir 1100?" (see Publications).

Árni Daníel Júlíusson, „Kristnihald og Landnámsjarðir“. Lecture at the Settlement History Conference in Hólar in Hjaltadalur, Skagafjörður on 30 September

Árni Daníel Júlíusson, „Landnám og byggð um miðbik Eyjafjarðar 880 til 1400“, (Settlement and its development in central Eyjafjörður in 880 to 1400). Accessible at the Two Valley website

<https://twovalleys.hi.is/wp-3-history-of-the-two-valleys/>.

### WP 4

The proposed milestones for WP 4 are the productions of peer-reviewed research papers and a graduation of a PhD student. For the year 2022, WP 4 intended to submit two manuscripts for peer review, one in the beginning of the year, another towards the end. Neither is achieved, but the deliverables (datasets) to support those milestones are largely in place (see above), and their production has commenced and will be the primary task of WP 4 in the early months of 2023. The environmental data were presented overseas at two international conferences (see section on publications).

## WP 5

The proposed milestones for WP 5, the excavations in Skriða and Búðarnes in Hörgárdalur and in Gásir were successfully reached. Two members of WP5 participated in the project meeting on the 25<sup>th</sup> of Nov. 2022 (ÁH and SB), giving talks about the results of the year. Additionally, in April ÁH gave a talk in the Iceland GeoSurvey online series of lectures (Ísorð) on the Nykurtjörn Debris Flows based on the 2021 excavation in Grund in Svarfaðardalur.

## Publications

List publications, manuscripts and conference proceedings, PhD and MSc thesis resulting from the project. Report how publications are in accordance with the IRF's open access policy.

### General

Two Valleys annual project report for 2021 (ársskýrsla).

Árni Daníel Júlíusson, „Tveir dalir í Eyjafirði – Svarfaðardalur og Hörgárdalur. Rannsóknir á miðaldasögu og miðaldaleifum 2021 til 2023.“ *Sútur* January 2022.

### WP 1

In 2022 the first article of the WP came out (in a peer reviewed journal, *Árbók hins íslenska fornleifafélags*). The article was written by dr. Árni Daníel Júlíusson and discusses the farm abandonment in North Iceland focusing on Svarfaðardalur in comparison with two other northern districts: ÁDJ „Á eyðibýlum norðanlands“. *Árbók Fornleifafélagsins* 110. árgangur, p. 43-77.

Additionally, a detailed field report was submitted in the summer of 2022. <https://twovalleys.hi.is/wp-1-settlement-investigation/>.

Elín Ósk Hreiðarsdóttir (ed). 2022. *Power, Wealth and Plague in Two Valleys: Field report of 2021, Work Packages 1 & 2*. FS871-21021.Reykjavík. See: <https://twovalleys.hi.is/wp-1-settlement-investigation/>.

### WP 2

Harrison, R. & H. M. Roberts. 2022. Skuggi Landnám Farm and Site Economy in Transition: An Assessment of the Structure A and Household Midden Remains from the Viking Age to the Medieval Period. Mooney, D.E., L. Guðmundsdóttir, B. Dahl, H. M. Roberts, and M. Ramstad (eds.), *Expanding Horizons: Settlement Patterns and Outfield Land Use in the Norse North Atlantic*, UBAS – University of Bergen Archaeological Series 13, 65-84.

Elín Ósk Hreiðarsdóttir (ed). 2022. *Power, Wealth and Plague in Two Valleys: Field report of 2021, Work Packages 1 & 2*. FS871-21021.Reykjavík. See: <https://twovalleys.hi.is/wp-1-settlement-investigation/>.

### WP 3

Monograph: The More You Have, the More You Get: Early Iceland and the Evolution of Inequality. This is not likely to be ready for publication until after 2023 as it is unfunded, and progress is slow.

Axel Kristinsson (2022), „Voru goðorð arfgeng fyrir 1100 (Were the godords heritable before 1100 AD?)“. *Saga* 60:2 (2022), 116-144.

#### WP 4

Results from WP4 were presented at two international conferences in 2023: The abstracts are:

Egill Erlendsson & Elísabet Ásta Eypórsdóttir

University of Iceland, Institute of Life and Environmental Sciences

#### **Landscape stability over 1100 years of pastoral farming in North Iceland**

*Poster presentation at the EAA conference in Budapest, August 31-September 3, 2022.*

<https://www.e-a-a.org/ea2022>

Elísabet Ásta Eypórsdóttir & Egill Erlendsson

University of Iceland, Institute of Life and Environmental Sciences

#### **Ecological impact of human occupation in Skiðadalur in North Iceland: preliminary results.**

*Poster presentation at the 51st Intern. Arctic Workshop in Longyearbyen, Svalbard, June 19-23, 2022.*

<https://aw2022.org/>

#### WP 5

Halldór G. Pétursson, „Skriðuföllin í Hörgárdal árið 1390 og afdrif Gásakaupstaðar. Staðreyndir, hugmyndir og tilgátur“. (The Landslides in Hörgárdalur anno 1390 and the fate of the Gásir trading place). *Heimaslóð* 19. hefti 2022, 5-39.

## Changes to the research plan (if applicable)

### Changes in staff and task allocation

Two of the staff had to leave the project last year. On one hand it was Gísli Pálsson, who was allocated salary in year 2 of the project. His role was in spatial analysis, described in the project description for WP1. He had to leave because of other commitments in family and work and was not able to attend to his role. Ruth Maher had a role in searching for pre-Christian burials on the ground. She worked in the field in the first year, but at the beginning of last year her family circumstances changed abruptly and she was not able to come to Iceland to carry on her work. The task allocated to her, field survey to find pre-Christian burials in the inner valleys of Svarfaðardalur and Hörgárdalur, also had to be abandoned. This was done based on an evaluation of the amount of labour necessary to produce results in this respect. It proved simply too hard a task to locate unfound pre-Christian burials with the methods used, in relation to the results. Instead, other, more indirect and circumstantial methods for analysing pre-Christian burials and their role in society, based on evidence already available have been carried out by PI Árni Daníel Júlíusson in relation to work in WP3. This involves mapping and spatial analysis.

The description of the spatial analysis in WP1 is as follows; "a comprehensive spatial analysis based on aerial imagery, archaeological research, analysis of the cultural landscape and the analysis of available written sources regarding settlement and economy will increase understanding of the major aspects of the settlement development during the entire period." Since the PI Árni Daníel Júlíusson had already carried out closely related tasks and put them forward, using Illustrator maps, archaeological surveys and available written sources (published in the books *Miðaldir í skuggsjá Svarfaðardals for Svarfaðardalur* (2016) and *A Tale of Two Valleys* (2022) for both valleys, Svarfaðardalur and Hörgárdalur in English), he has been doing spatial analysis as mentioned in the description of WP3. He will expand his role in this respect on the third year of the project, familiarising himself with GIS programs and working closely with other participants in the project to produce the aforementioned analysis.

A related issue discussed at the yearly meeting is the matter of project data management. This will be channelled through the spatial analysis. New project member Sólborg Una Pálsdóttir will assist PI Árni Daníel Júlíusson in the handling of data management. She is trained to do this task, having written an MA-thesis in archaeology on the issue of data management.

## WP 1

### Changes in research plans

The research plan of 2022 was largely unchanged from the submitted application of the project apart from the fact the burial hunt conducted in 2021 was not continued in 2022 as it was not considered a secure enough method to determine the presence/absence of burial in the areas. Instead, more emphasis was put on the farm mound modelling where 26 farm mounds were visited (in comparison to six in 2021).

Some changes were made in the personnel of WP1 between 2021 and 22. The excavation permit holder of 2021, Howell Roberts, left the project in the autumn of 2021 for a permanent post in Norway. The WP1 head, Elín Ósk Hreiðarsdóttir took over the post ex and wrote up the field report for the first year. In the summer of 2022 Stefán Ólafsson, who was also a member of the team in 2021, took over as a permit holder in the field.

According to the original application a field season was not planned for WP1 in 2023. Given the result of WP5 from 2022, where remains from the historic scree from 1397 in Langahlið was located and some indication of human occupation was found underneath it, discussion has taken place about the possibility of a team of archaeologists revisiting the site in 2023 to open a larger area in the hope of locating farm remains of Langahlið or other houses from the period before the scree.

## WP 2

Beyond the deliverables proposed for 2022 and 2023 being delayed due to covid-related setbacks in the field and the resulting major field season required in summer 2023, there are no major changes to the research plan.

## WP 3

No changes.

## WP 4

There are no changes to the research structure to report in terms of proposed aims and outcomes of the project. Fieldwork is proposed for 2023 but WP4 has already acquired all necessary materials to complete its part in the project. The only deviation from the original plan is a readjustment of the timing of publication due to a delay in the hiring of PhD student in 2021.



## WP 5

### Continuation of the project in the last grant year

Describe the research plan and milestones for 2022. Foreseeable changes to the proposed research plan, management and/or participation must be explained.

#### Highlights of the research plan

As mentioned elsewhere, a third field season will be undertaken by WP's 1,2 and 5. For WP2 this is necessary because of unforeseeable delays in the zooarchaeology work. Also, the project sees the Langahlíð farmhouse as an interesting site and a small force will be sent to do a better check on it than was possible last summer, when it was located by WP 5. WP 5 is interested in more work at Langahlíð, defining the limits of the 1390 landslide there.

Otherwise, all work packages will continue analysis of sources and samples. Also, preparations for a book volume on the results of the project will be taken up in the autumn in co-operation with representatives from Brepols publishers, who have agreed to work on this.

#### WP1

The settlement archaeology research will continue during the summer of 2023. Investigations will be carried out on the recently discovered human occupation under the scree from 1390 Langahlíð, Hörgárdalur.

Meeting in March: EH and SÓ will give talks on Archaeological and historical investigation of the origin, extent and decline of the Hörgárdalur and Svarfaðardalur settlement.

#### WP2 planned work in spring 2023:

Together with Harrison, WP2 PhD will continue with faunal analysis and locating suitable samples for biochemical analysis, and radiocarbon dating, if needed based on the Staðartunga dates already available due to one of Harrison's previous grants. In collaboration with Philippa Ascough and Ingrid Mainland who are both grant collaborators, isotope and trace element analysis and tooth microwear analysis is to start with three samples from Staðartunga faunal remains as pilot study in collaboration between labs at AHKR (UiB), SUERC (U Glasgow) and UHI (Orkney) to investigate the analytical potential of the archaeofaunal materials.

This will then ideally lead to a larger scale study of such kind in winter of 2023, 2024, upon assessment of the last set of faunal remains retrieved from Staðartunga and ideally Svarfaðardalur midden layers.

Overall goal of biochemical and teeth microwear work:

In collaboration with Philippa Ascough from the Scottish Universities Environmental Research Centre (U Glasgow, UK) analysis of stable isotopes such as carbon ( $\delta^{13}\text{C}$ ), nitrogen ( $\delta^{15}\text{N}$ ), oxygen ( $\delta^{18}\text{O}$ ) and sulphur ( $\delta^{34}\text{S}$ ) in selected animal skeletal remains will be coordinated. Harrison also collaborates with Ingrid Mainland (U Highlands & Islands, UK) on a pilot study to establish the potential of isotopic, trace element and dental microwear evidence in EY. They will establish baseline signatures for carbon and oxygen isotopes and microwear patterning in 20 modern sheep of known movement patterns and grazing/foddering regimes.

Should the HÖRG and/or SVF middens reveal suitable whale bone materials, Harrison collaborates on securing funding to conduct Marine Mammal aDNA analysis as directed by Vicki Szabo, Western Carolina U (US), and as carried out by Brenna McLeod Frasier, Saint Mary's University, Halifax (CA).

Field work 2023:

The plan for the WP2 summer season is to finish Staðartunga midden coring and excavation in Hörgárdalur. In Svarfaðardalur, three sites will be identified for midden research potential.

### WP 3

Meeting in March: AK gives a talk on theoretical approaches to the formation of social stratification.

Continued work on papers on manors, tithe and class structure (ÁDJ & AK).

### WP 4

The plan for 2023 is to prepare a manuscript for submission as part of Elísabet Ásta's PhD thesis, based on data from Svarfaðardalur (the farms, Sakka and Kot). Alongside that, WP4 aims to complete chronological, XRF, sedimentary and pollen analytical work on samples from Ásgerðarstaðir and Staðartunga in 2023. This will form the base for Elísabet Ásta's second manuscript of her PhD thesis.

### WP 5

The natural hazard research will continue during the summer of 2023. Investigations will be carried out on the 1390 landslides in Hörgárdalur aiming on the extent of the Langahlíð landslide. Further investigation will be carried out in Gásir on possible devastation of the ancient harbour in the floods in 1390.

## Milestones

List the proposed milestones, with reference to the milestones specified in the application.

### All packages

Harrison and Júlíusson plan on collaborating on a publication to jointly address the research questions put forth in the grant proposal.

### WP1

In the second half of the year the members of the WP will attend the annual meeting of the project in the spring of 2023 and present the results of the summer as well as presenting a detailed field report of the year in the spring of 2023.

### WP 2

Milestones predicted in 2023:

Moller-Nilsen will present at one conference in winter 2023/2024. Together with Harrison, she will produce a post-excavation report for the 2022 field season, and a preliminary zooarchaeology report.

Harrison will present a paper as part of the SAA annual conference in April 2023 and will publish a paper on the site of Siglunes in Eyjafjörður. This site is connected to the Two Valleys Project due to it being a long term coastal settlement site and part of the Eyjafjörður socioeconomic system. Target publication is The Journal of the North Atlantic.

### WP 3

Axel Kristinsson, “Skapandi ættfræði”. Submitted and accepted by the journal *Skírnir*, it will be published in 2023.

### WP 4

In the 2023, in WP4 seeks to fulfill the following milestones: 1) preparation of a manuscript for publication, based on data from Svarfaðardalur; 2) complete analyses of samples from two sites in Hörgárdalur.

## Foreseeable changes to the research plan (if applicable)

A third field season will be active during the summer of 2023 in Work Packages 1, 2 and 5.

### WP1

The settlement archaeology research will continue during the summer of 2023. Investigations will be carried out on the recently discovered remains from the 9th-14th century settlement in Langahlíð, Hörgárdalur. This is a change of the plan as it was put forward in the project description.

### WP2

Field work 2023:

The plan for the WP2 summer season is to finish Staðartunga midden coring and excavation in Hörgárdalur. In Svarfaðardalur, three sites will be identified for midden research potential.

### Possible changes

Harrison and Smiarowski conference:

Due to worldwide interruptions to travel and pushed back conference meetings as a result, it is not possible to carry out the proposed NABO. More realistic is a larger Meeting organized by Júlíusson and Harrison in either 2024 or 2025 to mark the end of the Two Valleys Project. This will then produce a Monograph, currently planned to be published via Brepols Publishing.

### WP3

### WP4

No foreseeable changes are proposed to the structure of research within WP4. The only noteworthy change regards the process of submitting papers for peer-review. This is largely due to a delay in the process of hiring a PhD student in 2021.

### WP5