ICELANDIC RESEARCH FUND

ANNUAL REPORT

The annual report covers the grant period for the calendar year 2023 (01.01. - 31.12.).

A signed copy of the annual report shall be submitted to Rannís by email to rannsoknasjodur@rannis.is – Subject: IRF - Annual report.

Grant number: 228883-052

Project title: The Rise and Fall of Transhumance in Iceland 800–1800

Grant year: 2023

Project leader: Egill Erlendsson

Project leader email: egille@hi.is

Type of grant: Research Grant

Expert panel: Humanities and Arts

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 Reykjavík, 01.02.2024
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

Note: A financial report for the project is submitted separately.

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.

The project has advanced according to plan in most aspects. In some ways it is ahead of its proposed schedule and has acquired greater data than proposed. The project has also bred spin-off projects which expand its academic potential and methodological scope. WP3 has fallen slightly behind schedule, due to changes in personnel and the hiatus this created in its process. This is outlined in the following sections.

The research team met several times over the year 2023:

Feb. 09, (Full team meeting: Egill Erlendsson [EE], Elín Ósk Hreiðarsdóttir [EÓH], Árni Daníel Júlíusson [ÁDJ]; Gylfi Helgason [GH], Julia Rose Esch [JRE], Oscar Aldred [OA], Lilja Laufey Davíðsdóttir [LLD].

Sept. 01, (EE, EÓH, ÁDJ, GH).

Nov. 01, (EE, EÓH, ÁDJ, GH).

Dec. 13 (EE, EÓH, ÁDJ, OA, Snædís Sunna Thorlacius [SST]).

Besides that, members of the research team have been in informal contact on numerous occasions throughout the year, e.g. during fieldwork in which most members of the TransIce group participated.

In the following sections (next pages) we describe the progress of each WP. They are: WP1 Transhumance and its history, WP2 Transhumance and its archaeology, WP3 Transhumance and its environmental context.

WP1 – Progress report

Árni Daníel Júlíusson and Gylfi Helgason

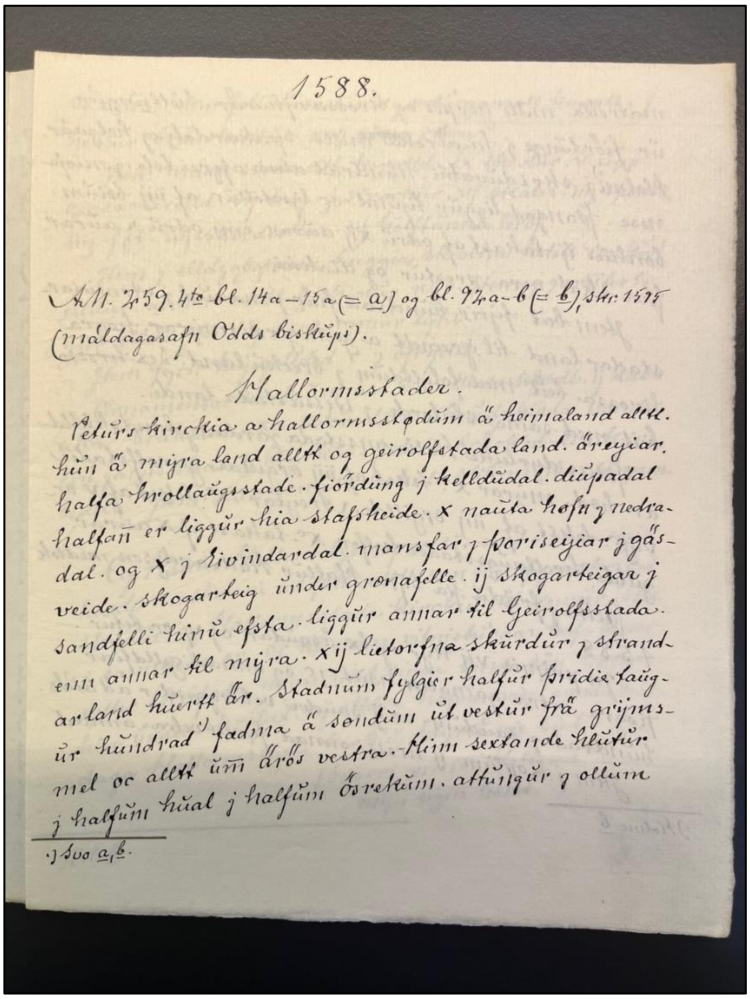
WP 1 can be divided into three main aspects: a) Written sources about transhumance and shielings, from AD 1100 to 1800, b) analysis of shieling sites from the database of Ísleif (the database of the Institute of Archaeology, Iceland) and c) a review and analysis of the research literature concerning shielings in the North Atlantic area, Greenland, the Faroe Islands, Scotland, and Norway. These first two source groups will be explored to analyse the spatial and temporal patterns of shielings in Iceland. Then this analysis will be used to locate the Icelandic system in the wider world of North Atlantic transhumance and transhumance structures and practices. This WP also deals with the GIS analysis and database in the project. Members participating in this WP are Dr Árni Daníel Júlíusson and Gylfi Helgason (who also worked for WP2), as well as two students (Sara Margrét Ragnarsdóttir and Þóra Kristín Briem).

A central task of the WP regarding the documentary sources is to critically analyse the *Diplomatarium Islandicum* (*DI*), which contains all written records of medieval and early later historical shielings. During the second year of the project, we finished collecting and cataloguing all mentions of sheilings and transhumance practice in *DI*. This has given us invaluable insight into transhumance practice in medieval Iceland, such has rights to access or use the sheilings, who owned them, and number and types of animals used during medieval times. A part of the DI analysis and the frequency of shielings was presented the ESEH Conference in August where Dr Á.D. Júlíusson talked about the boom and bust of the shielings in 11-15th century Iceland (see attachment 1). Documents points to shielings not being a common feature in Iceland until the 12th or 13th century, but they quickly fell out of use in the Black death in 1402-1404 before a slow uptake in the 15th and 16th century. This is also mirrored in data from Ísleif analysed by G. Helgason (see below) and chronological data from WP 2. The oldest shielings, from Viking Age, seems to be owned by high-status farms and located far away from the mother settlement (in underused valleys or areas). Shielings seem then not to be a common feature in Icelandic agricultural society until the 12th century. This is a fresh insight and more detailed look into the transhumance practice in Iceland, which was thought to have been a common feature early in the Viking Age, and perhaps saw a steady, or even static, usage of shielings over the centuries.

We have also started to explore documents related to later historical shieling practices that have either rarely or never been analysed or catalogued before regarding transhumance practices, and thus have a great potential to give us new insights on the transhumance in early modern Iceland. The most valuable sources on shielings in the period up to 1570 is the collection of muniments or máldagar (example in Fig. 1). Such collections also exist for the period 1570-1702, in the form of collections of muniments by bishops such as Oddur Einarsson and Brynjólfur Sveinsson at Skálholt. We hired a history student, Sara Margrét Ragnarsdóttir, to work at the archive on an early 20th century copy of the muniments of bishop Oddur Einarsson (1559-1630) at Skálholt, which is stored at the Icelandic national archives. S.M. Ragnarsdóttir's work is now complete, and this muniment collection will be explored in greater detail during the third and final year of the project.

Rannsóknasjóður

rannís


1588.

AM. 259. 4to bl. 14a–15a (= a) og bl. 92a–b (= b), skr. 1575 (máldagasafn Odds biskups).

Hallormsstader.

Pêturs kirckia a hallormsstødum á heimaland allt. hún á myra land allt og geirolfstada land. áreyiar. halfa hrollaugsstade. fiórdung j kelldúdal. diúpadal halfan er liggur hia stafsheide. x nauta hofn j nedra dal. og x j Eivindardal. mansfar j þoriseyiar j gás veide. skogarteig under gronafelle. ij skogarteigar j sandfelli hinu efsta. liggur annar til Geirolfsstada. enn annar til myra. xij lietorfna skurdur j strand arland huert ár. Stadnum fylgier halfur þridie taug ur hundrad[1] fadma á sondum ut vestur frá grijms mel oc allt um árós vestra. Hinn sextande hlutur j halfum hual j halfum ósrekum. atfungur j ollum

1) Suo a, b.

Fig. 1. A photo of 20th century copy (Einar Þorkelsson) of Hallormsstaðamáldagi (E-Iceland, Hallormsstaðaminument).

The work of analysing another important written source, *Jarðabók Árna Magnússonar og Páls Vídalíns* (*Jarðabók*) proposed in the project description, has started. *Jarðabók* is a comprehensive and exhaustive account of the distribution and status of shielings, both abandoned and in operation in Iceland during the period of 1703-1714. The task of analysing and registering the material about shielings in *Jarðabók* was allocated to an MA student, in accordance with the project description. The MA dissertation will, among other things, provide data and answer on distribution of shielings compared to earlier centuries and to the value of the farms who owned them as outlined in the project description. During the spring of 2023 an advertisement was put out and Þóra Kristín Briem (BA in archaeology) was hired after an interview with the PI E. Erlendsson and Á.D. Júlíusson. Þ.K. Briem enrolled in the fall in the MA program in Historical Archaeology at the University of Iceland. Briem is supervised by prof O. Vésteinsson along with Dr Árni Daníel Júlíusson. She has now finished the fall semester. The project will offer her archaeological GIS teaching by G. Helgason with data from the project in 2024, which will be important for her MA dissertation since no such module is offered by the University of Iceland at the moment.

Among the proposed milestones in the project is a translation of a classic book by Egon Hitzler published in 1979 about Icelandic shielings and transhumance practice in Iceland. The work was done by Á.D. Júlíusson, who has translated all seven chapters of the book from German to English (see attachment 2). The draft is now ready for a professional translator to correct. The work on introduction chapter, which will summarise recent development on transhumance practice in North-Atlantic as described in the project description (section e.) will start in 2024.

Spatial and Ísleif analysis

Another aspect of WP1 was to analyse the spatial patterns of shielings that have been field surveyed in Ísleif. This was done by Gylfi Helgason. Concerning the GIS data, all shielings, and farms along with peat graves and charcoal pits (kolagrafir) have been transformed from an access database into a GIS one (table 1). The data has clearly defined attribute behind it (eg Ísleif number, farm value, no of ruins, elevation, slope) so it can be analysed more efficiently and the results of the Ísleif analysis can be quickly and easily transformed into maps. Work is ongoing to make the data in accordance with FAIR standards. We have also prepared the database to be able to undertake some environmental analysis to answer these questions in the project description: "Are shielings located near other types of natural resources, for example water, peat for cutting or woodland?" This work will be done in cooperation with Snædís Thorlacius, the PhD student in WP 3 in 2024, who will provide us with precise controlled chronological environmental data from analysed samples taken at shieling sites that can be offered by historical documents or GIS data. We will connect historical environmental data, with archaeological survey material and palaeoecological samples gathered in the field to answer these questions. This is a novel approach in Icelandic landscape archaeology and is expected to further our knowledge on ecological landscape and its significance for transhumance practice in Iceland, and methodological advantages in more general sense in Icelandic archaeology and history.

Table 1. *Data put into the project's GIS.*

Data	**Amount**
Shielings	571
Farms	1918
Peat graves	1074
Shepard's house	167
Charcoal pits	261

Still, we have done preliminary analyses in relation to shieling sites and peat cutting. Initial results indicate that peat graves are closely connected to shielings in Eyjafjörður, but not elsewhere in Iceland (Fig. 2). This gives us a more detailed view of the shieling landscape and that peat cutting gathering was also an activity undertaking at several shielings in Eyjafjörður if the landscape, or the environment, allowed it. Indeed, it has been suggested at several shieling sites in Iceland, but now we have a more concrete view regarding other activities undertaken at shieling sites than strictly dairy production.

The slope and elevation analysis of all shielings and farms in Iceland is now complete (Table 2 and Table 3). This year we centred on S-, SW-, and a part of W- Iceland that are less mountainous than N-, Vestfirðir, NE- and part of W-Iceland analysed last year. Nevertheless, the results are still that shielings are located on a higher elevation than farms. Shielings are also in most cases in more slope areas compared to farms, which tells us that people are trying to expand their available grazing area, in a harsher and steeper terrain. In the few cases where shielings are on a flatter terrain than farms, e.g. Hrunamannahreppur (ÁR) and Rosmhvalaneshreppur (GK). It is likely because only a few shielings have been surveyed, for instance only one shieling has been field surveyed in Rosmhvalaneshreppur. This will be scrutinised further, however, in 2024.

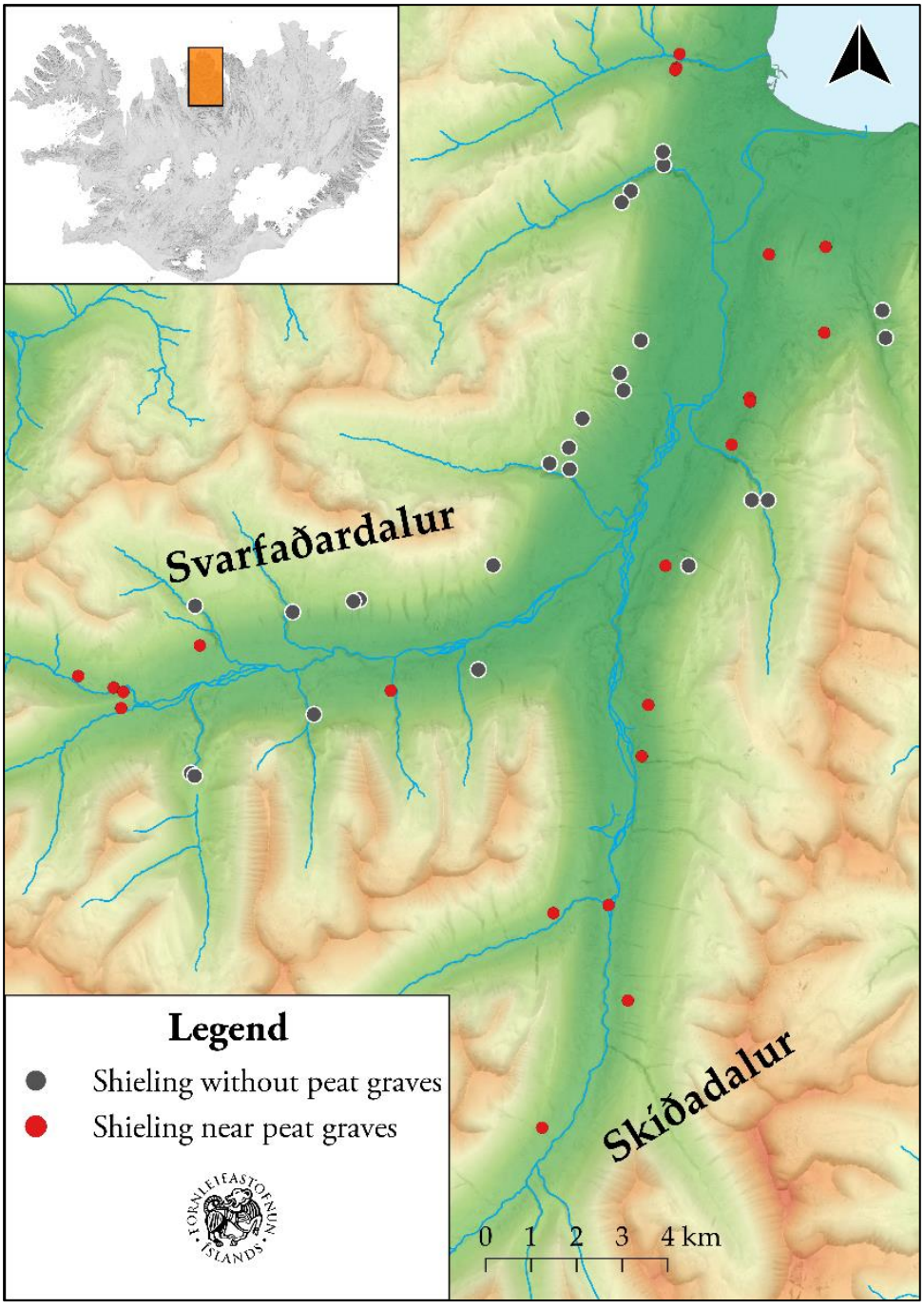


Fig. 2. *Shielings without and near peat graves in Svarfaðardalur, N-Iceland. Skíðadalur belongs to Svarfaðardalur.*

Table 2. *Average slope of farms and shielings analysed in the project's second year.*

Hreppur	Average slope of farms		Average slope of shielings
Hraungerðishreppur (ÁR)	2.2°		3°
Sandvíkurhreppur (ÁR)	0°		0°
Hrunamannahreppur (ÁR)	4.6°		3°
Grímsneshreppur (ÁR)	3.5°		4.1°
Þingvallahreppur (ÁR)	4.5°		6.6°
Ölfushreppur (ÁR)	2.25°		4.4°
Selvogshreppur (ÁR)	0.5°		2.25°
Rosmhvalaneshreppur (GK)	1.5°		0°
Vatnsleysustrandarhreppur (GK)	1.3°		2.5°
Álftaneshreppur (GK)	1.6°		2.3°
Seltjarnarneshreppur (GK)	1.2°		0°
Kjalarneshreppur (GK)	2.3°		13.9°
Kjósarhreppur (GK)	4.9°		8.8°
Eyjafjallahreppur (RA)	5.6°		3.7°
Fljótshlíðarhreppur (RA)	4.8°		8°
Rangárvallahreppur (RA)	2.8°		5.2°
Holtamannahreppur (RA)	2.4°		5.3°
Leiðvallahreppur (SF)	4.5°		3.2°
Staðarsveit (SN)	No data		6.7°
Neshreppur utan Enni (SN)	No data		2.7°
Brimisvallahreppur (SN)	No data		5.9°

This is the first time such analysis has been done in Iceland for the whole country and the first time with such a high-quality DEM model (from Landmælingar Íslands) (the last analysis was done by Gunnarsdóttir in 2002 for a small part in N-Iceland, but since then there has been swift development in quality of DEM models available in Iceland). The new data will not only help us identify better new shieling sites during field survey (or re-interpreted old sites with more robust confidence) based on their elevation and slope, but also increase our understanding on how transhumance practice functioned in Iceland. The slope and elevation data (see example in Fig. 3) were presented at the ESEH (European society for environmental history) conference in August 2023 by G. Helgason (see attachment 3) and will also form a part of paper offered to Landscape History later in 2024 (see draft in attachment 4).

***Table 3**. Average elevation of farms and shielings analysed in the project's second year.*

Hreppur [1]	**Average elevation of farms (m a.s.l.)**	**Average elevation of shielings (m a.s.l.)**
Hraungerðishreppur (ÁR)	30.1	87
Sandvíkurhreppur (ÁR)	5	5
Hrunamannahreppur (ÁR)	95.7	155
Grímsneshreppur (ÁR)	78.5	126
Þingvallahreppur (ÁR)	119	208.2
Ölfushreppur (ÁR)	20	181
Selvogshreppur (ÁR)	2.75	103.3
Rosmhvalaneshreppur (GK)	4.5	30
Vatnsleysustrandarhreppur (GK)	3	61.7
Álftaneshreppur (GK)	13.6	84.5
Seltjarnarneshreppur (GK)	3.4	100
Kjalarneshreppur (GK)	30.5	176.3
Kjósarhreppur (GK)	66	186.7
Eyjafjallahreppur (RA)	33.6	102.7
Fljótshlíðarhreppur (RA)	91.7	167.5
Rangárvallahreppur (RA)	24	105
Holtamannahreppur (RA)	41.2	78.1
Leiðvallahreppur (SF)	97.7	202.3
Staðarsveit (SN)	No data	134.6
Neshreppur utan Enni (SN)	No data	104.8
Brimisvallahreppur (SN)	No data	134.6

[1] Desktop-research or field survey has not been done in all of these counties, only part of them, and therefore not all *Hreppur* that belonged to those counties are found in the table since we lack data from them.

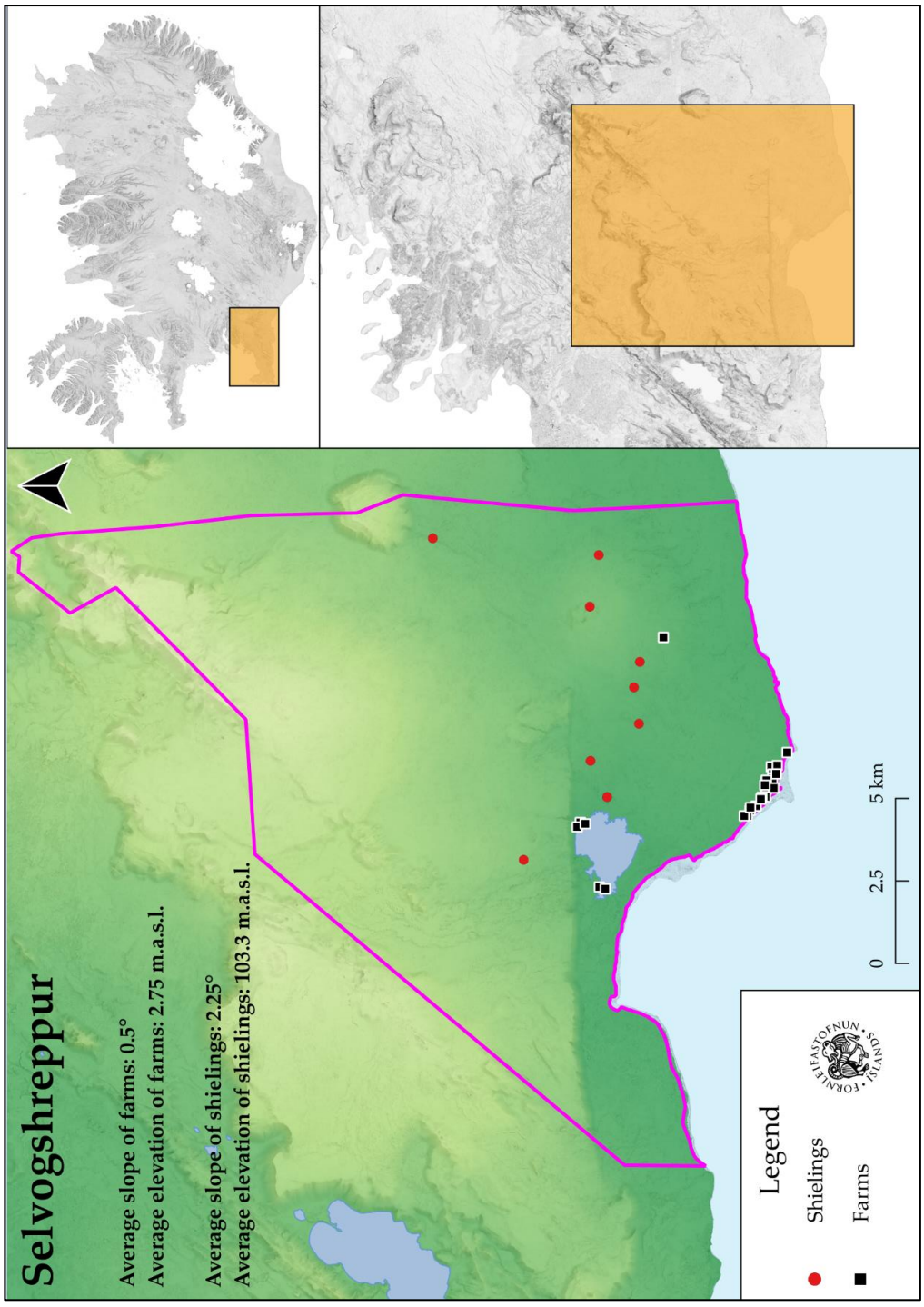


Fig. 3. *Slope and elevation data for shielings in Selvogshreppur.*

We have also started and are near completion of analysing data from Ísleif, an archaeological database that includes information from historical and oral sources as well as material from archaeological surveys. Not all areas in Iceland have been field surveyed, however, and that is why the number of shielings in Table 4 is higher than the number in the GIS database (that only includes shielings that have been visited in the field). This work was done by G. Helgason, who has analysed the number of shielings in Ísleif and compared it to farms, the number of ruins per shielings and how it correlates with the farm value of the farm who owned the shieling. This should give us a fantastic view of how shielings operated in Iceland (see table 4) and also give us an excellent tool to identify and describe the spatial pattern of shielings in each region of Iceland, which in turn give us ideas regarding its role in the agricultural system as stated in the project description. We also anticipate that more knowledge and regional variations on shielings and detailed analysis from Ísleif will provide fresh discussion points on how to identify shielings in Icelandic landscape, a burning issue in Icelandic academic discussion on shielings. The Ísleif analyses was partly presents at FSI.

Table 4. *The number and ratio between shielings and farms in Iceland that are registered in Ísleif (both field survey and from desktop research).*

County	Shielings (no)	Farms (no)	Ratio
Árnessýsla	205	562	0.5:1.5
Barðarstrandasýsla	124	211	0.7:2.4
Borgarfjarðarsýsla	107	242	0.8:1.8
Dalasýsla	198	199	198:199
Eyjafjarðarsýsla	196	449	0.8:1.8
Gullbringu- og Kjósarsýsla	117	360	0.4:1.4
Húnavatnssýsla	166	409	0.7:1.7
Ísafjarðarsýsla	37	290	0.14:1.14
Mýra- og Hnappadalssýsla	168	268	1.7:2.7
Norður-Múlasýsla	98	255	0.6:1.6
Norður-Þingeyjarsýsla	46	133	0.5:1.5
Rangárvallasýsla	96	472	0.3:1.2
Skaftafellssýsla	138	256	1.2:2.1
Skagafjarðarsýsla	74	455	0.2:1.2
Suður-Múlasýsla	75	257	0.4:1.5
Snæfellssýsla	108	320	0.5:1.5
Strandasýsla	31	126	0.3:1.3
Suður-Þingeyjarsýsla	200	328	1.6:2.7
Vestmannaeyjar[2]	0	20	
Iceland	**1855**	**4839**	**0.7:1.9**

[2] Vestmannaeyjar usually belonged to Rangárvallasýsla.

lunchtime seminar in 2023 by G. Helgason (attachment 5) and he will present it in more detail at LAC (Landscape Archaeology Conference) 2024 in Spain and at the Lunchtime seminar hosted by the University of Iceland and the Society of Archaeologists in Iceland in 2024. It is the largest seminar dedicated to archaeological research in Iceland and will hopefully spark interesting debates about data and ideas created in the project. It is also a fantastic chance to introduce the landscape and historical part of the project to other archaeologists in Iceland since most of the output in the project is in English (or presented at international conferences).

Apropos the number, the ratio between shielings and farms in Iceland is 0.7:1.9. Mountainous regions such has Dalasýsla or Eyjafjarðarsýsla seem to have higher number of shielings than flatter or wetland dominated areas in Iceland. The high number of shielings at Dalasýsla is even more interesting owning to the fact that almost no field surveying has taken place in Dalasýsla, only desktop-research (Ice. heimildaleit/svæðisskráning), meaning that the number of shielings is probably underestimated since more sites are identified in field surveys that were known before only through desktop-research. The ratio between shielings and farms in Dalasýsla is 198:199, but in flat and wetland domination areas in the south, such as Rangárvallasýsla the ratio is 0.3:1.2.

Looking at the numbers from Rangárvallasýsla in more detail (Table 5), most of the shielings are found in Fljótshlíðarhreppur (1.4:2.4), which is less dominated by wetlands than some of the counties in Rangárvallsýsla. Similarly, at Árnessýsla (Table 6), where most of the shielings are found in Grímsneshreppur (0.6:1) and Gnúpverjahreppur (0.5:1), which are both located higher in the landscape and more inland than for instance Skeiðahreppur, which is dominated by wet landscapes, and only two shielings are known in that area (Table 6). Notably, a large part of Árnasýsla has been field surveyed, including Villingaholtshreppur. The few numbers of shielings in that county cannot be explained by lack of field visit or research. This indicates that transhmance formed a more vital part of agricultural lifestyle of people in N-Iceland, and people in S-Iceland choose not to use erect shielings in the outskirts of farms; thus representing a different use of the infield-outfield system. The next step in this analysis, done 2024, is to compare the number of shielings found in Ísleif to shieling mentioned in Jarðabók as detailed in the project description. This will be done by both Á.D. Júlíusson, G. Helgason and the MA-student Þ. Briem.

***Table 5**. The number and ratio between shielings and farms in Rangárvallasýsla, S-Iceland, that are registered in Ísleif (both field survey and from desktop research).*

Hreppur	Shielings (no)	Farms (no)	Ratio
Eyjafjallahreppur	21	83	0.3:1.3
Austur-Landeyjahreppur	12	50	0.3:1.3
Vestur-Landeyjahreppur	5	43	0.1:1.1
Fljótshlíðarhreppur	29	50	1.4:2.4
Hvolhreppur	0	33	
Rangárvallarhreppur	6	55	0.6:1.1
Holtamannahreppur	16	118	0.2:1.2
Landmannahreppur[3]	7	39	

[3] No desktop-research (ísl, svæðisskráning/heimildaleit) has been conducted in Landmannahreppur and few field survyes have taken place there the number are therefore quite off and hence no ratio calculated.

***Table 6**. The number and ratio between shielings and farms in Árnessýsla, S-Iceland, that are registered in Ísleif (both field survey and from desktop research).*

Hreppur	Shielings (no)	Farms (no)	Ratio
Villingaholtshreppur	0	38	
Hraungerðishreppur	3	52	0.06:1
Gaulverjabæjarhreppur	3	36	0.09:1
Stokkseyrarhreppur	18	72	0.3:1.3
Sandvíkurhreppur	9	34	0.4:1.4
Skeiðahreppur	2	30	0.07:1
Gnúpverjahreppur	17	31	0.5:1
Hrunamannahreppur	24	50	0.9:1.9
Biskupstungnahreppur	29	57	0.5:1
Grímsneshreppur	34	58	0.6:1
Þingvallahreppur	26	27	26:27
Ölfushreppur	20	63	0.3:1
Selvogshreppur	15	14	15:14

Ísleif analysis have also given us a good opportunity to explore the spatial and the archaeology of shielings and put the Ísleif data into a wider socio-economic and environmental context as detailed in the project description. From the Ísleif analysis, it now evident, for instance, the higher the value of the farm is, the more complex shieling structure it has, as in more ruins. Whilst we cannot say for certain without open-area excavations, it likely that the higher number either represent more complex activities at shieling sites or indicates layering of shieling operational histories from multiple periods. This pattern is noticeable all over Iceland. In Gullbringu- og Kjósarsýsla, for instance, shielings with four ruins are owned by farms valued on average at 39 hdr. whilst shielings that have less than three ruins are owned by farms valued for much less: shielings with three ruins are owned by farms valued at 28,7 hdr (on average) and shielings with two ruins owned by farms valued at 17,2 hdr.

Gullbringu- og Kjósarsýsla is also an interesting example because that is the area where we have the largest number of ruins per shieling. This is mainly thanks to shielings in Vogar (Vatnsleysustrandarhreppur). Whilst this merits further research that will be done in 2024, it is perhaps connected to the social custom of sharing shielings between farms that seems, based on material gathered during field surveys and found in Ísleif, to be more common in Vatnsleysuströnd than elsewhere in Iceland. We will also scrutinise shielings owned by tenant farms (and even sub-tenant farms) more and see if their shielings differ from well-to-do farms in 2024 to deal with questions related the socio-economical aspects of transhumance as mentioned in the project description. This will be done by both Á.D. Júlíusson, who will provide historical context from his analysis in DI, and G. Helgason.

Further Ísleif analysis are still ongoing and work have started to examine the number of rooms in shielings where there is only one ruin found at shieling sites to identify any regional variations in transhumance practice in Iceland. This information will be examined in more detail in 2024, with data from WP 2 (chronological data) and WP 3 (environmental data and analyses, see above for instance). It can give us a clearer and detailed view of how transhumance practice operated in

Iceland than we have today and the archaeology and architecture of shielings in Iceland as detailed in the project description.

The information extracted and examined from Ísleif is unique since it has never been done in Iceland on this scale before, and the number of ruins per shieling has never been connected to the value of the farms. These data, along with GIS data mentioned above, will form a vital part of paper offered to Landscape History in 2024 (see draft in attachment 4). It will also compare the Ísleif data to Greenland and Faroe Island where applicable. Further, the data will be presented at LAC 2024 in Spain. Work in Ísleif will continue in 2024, both to synthesis and finalise the data but also to use the Ísleif analysis answer these questions asked in the project description: "What factors point to a site being a shieling: Is it strictly the place name? Its location? Its architecture or a combination of these factors? Is there a regional difference between these factors?"

WP2 – Progress report

Elín Ósk Hreiðarsdóttir & Oscar Aldred

The second field season of WP2 took place in 2023, this time in the southwest of Iceland. As in previous year, the main aim of WP2 is to date the origins and end of transhumance in the study areas through tephrochronology and archaeology. By this we hope to advance our knowledge and understanding of the rise and fall of the transhumance system in Iceland AD 800–1800. The emphasis is thus on dating the establishment of shielings and defining when periods of intensive and widespread transhumance emerged and subsequently declined.

A secondary goal is to create a robust typology of shielings and understand their usage by drawing on the archaeological material recovered during excavation, supported heavily by various environmental samples from shieling sites.

The focus of the 2023 field season was in southwest of Iceland, more specifically in Reykjanes and in and around Mosfellsdalur. The aim was to date ten shielings in these areas.

The fieldwork took place in late June and early July and the shieling team consisted of the following: Oscar Aldred (permit holder), Elín Ósk Hreiðarsdóttir, Gylfi Björn Helgason, Stefán Ólafsson, Agla Geirlaug Aradóttir Ringsted, Julia Esch and Egill Erlendsson who were divided up into 2-3 smaller teams at each location.

At each site the existing field survey was reviewed, and a more detailed description made of all shieling structures, routes to and from the shielings and the general vegetation, landscape, and surroundings. All archaeological features were located and measured with a handheld GPS (Trimble Geoexplorer 6000 - ISN93) providing a detailed map of each site. Aerial photographs (from drones) were also collected at all the sites (see Figs. 4 and 5) and 3D modelling done at three sites Helgusel, Baðsvellir and Sogasel). Altogether 11 sites were explored, nine with trenches and coring and two with coring alone; one more than originally planned. The dating of the tephra in selected trenches was carried out in two ways. The first by in-the-field observations and tephra analysis of the sections in the excavated trenches by Magnús Á. Sigurgeirsson, and second through the dating of the tephra spot-samples from coring (and other trenches) by Sólveig Guðmundsdóttir Beck, Snædís Sunna Thorlacius and Egill Erlendsson. The tephra report of Magnús Á Sigurgeirsson is completed (see attachment 6). The analysis of 144 tephra samples taken during the field season (from cores and trenches) is close to completion and will be returned at the end of January 2024. The post-excavation work of the field season is well on its way and will be completed in the spring of 2024. Following are some of the main conclusions of the second field season of this project.

Main result of the fieldwork in the southwest of Iceland in 2023

Altogether 11 shielings were chosen for investigation in 2023, based on information from *Ísleif,* the database of the Institute of Archaeology in Iceland (FSÍ) and other published surveys. To get a good representative sample of the shieling and transhumance system, a range of structurally variable shielings were selected: e.g., shielings with both few and many structures. In addition, the site selection ensured that the shielings were distributed fairly evenly throughout the research area and had potential of good tephra chronology for dating (Fig. 6). Finally, access to the shieling was an important issue as the aim was that the walk to the shieling and back with equipment should take less than a couple of hours.

***Figure 4**: One of the shielings looked at in 2023, Helgusel (site 06) within the property of Mosfell in Mosfellssveit. The site was surveyed, and a trench excavated into the most complex ruin. Additionally, 10 cores were taken on the site, as well as samples for OSL, eDNA and archaeoentemology*

Altogether nine shieling sites were trenched. In all the sites a single trench was excavated, but additionally 124 cores were taken at 11 sites.

A range of different archaeological methodologies were used to investigate the sites. In addition to excavation and coring (see above), OSL dating was trialed to investigate whether further contextual dating could be determined. OSL samples for dating were collected from six sites. Another methodology that was trialed across four sites was eDNA sample analysis. This can help us to understand the range of species intersecting with the shieling sites, and whether there is a temporal dimension to this (based on tephra). In addition to the trialing of OSL and eDNA, samples for archaeoentemology (four sites) and micromorph analysis (one site) continued to be collected.

Even if the dating of the dating of the tephra spot-samples is still pending some the shielings have already been dated based on visible tephra (see Table 7). The date of the shielings turned out to be quite varied. The first conclusions show some sites with activity occurring before the 13th century CE (sites 01 & 09 - Sogasel & Vífisstaðasel), post-13th century CE (at site 02 – Selsvellir), and post 16th century CE (at site 05 – Mosfellssel). When the spot-dates analysis is completed, we will have further dates to add to the picture of the temporal diversity associated with shieling. The dating of the shielings will be used to build a deeper more comprehensive understanding of shieling use and transhumance within the 2023 study area.

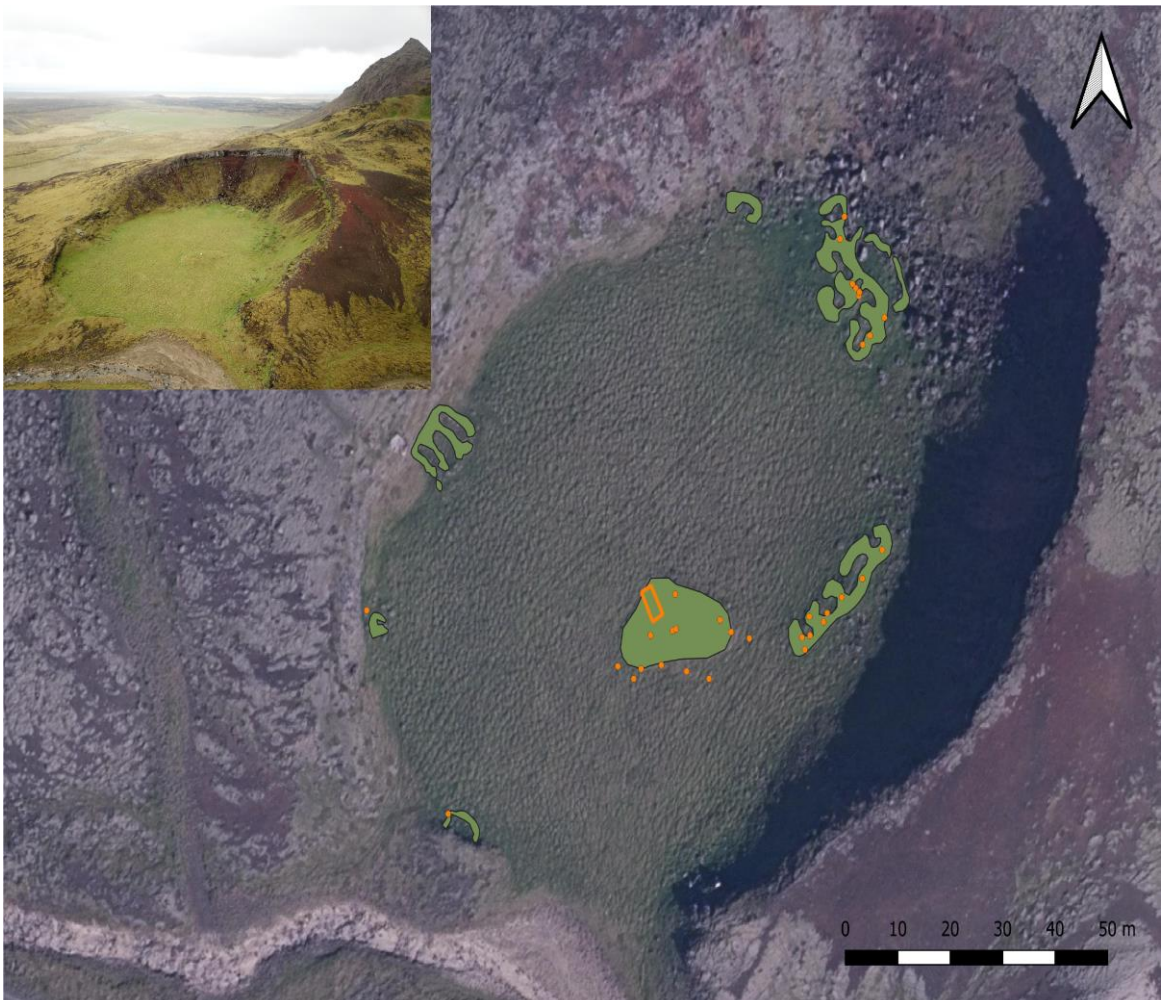


***Fig. 5**: Sogasel (site 01) was one of the shielings looked at in 2023. The shieling is located at an old crater and during the field season earthquakes in the area (pre-emptying an eruption in Litli-Hrútur that started on the 10th of July) caused considerable rock fall from the north and east sides of the crater. The excavation of the trench was in the middle of the area. The central map shows surveyed ruins on an aerial (from Loftmyndir ehf), all ruins in the area are green and trench and cores orange. In the top left corner is a drone shot of the site, looking towards north.*

The interim pattern of dating, however, is not so dissimilar to the one found in the north of Iceland in 2022 where we had a number of pre- and post-1300 CE shielings. What is different is that this year in many cases it was not clear *when* the shielings stopped being used and fell into disrepair. Tephra preservation to determine abandonment date was poor, and only in a few instances the abandonment date was clear. It is our hope, however, that the spot-dates associated with this evidence that is forthcoming might shed a better light on this matter.

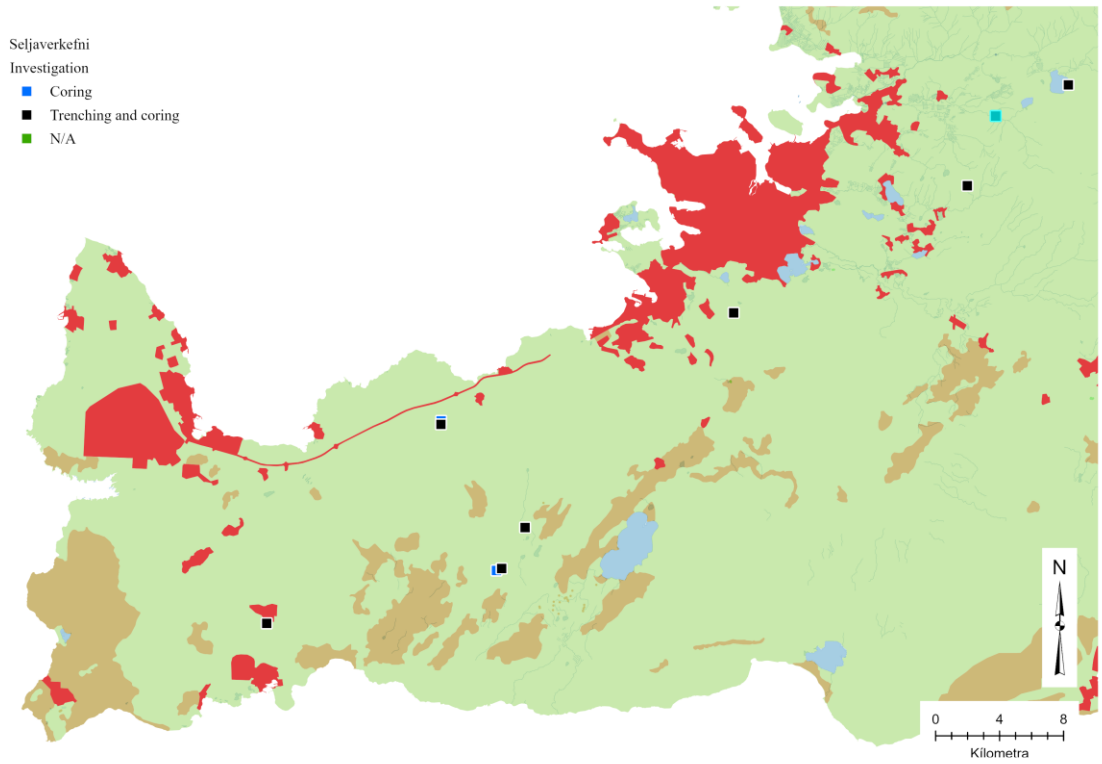


Fig. 6. *Location of trenches excavated and of the coring done in southwest of Iceland in 2023*

Table 7. *The application of archaeological methodologies at each site investigated in southwest of Iceland in 2023.*

Site ID	No.	Name	Exc	Core	OSL	eDNA	AE	MM
GK-001:052	01	Sogasel	x	x	x	x	x	
GK-009:012	02	Selsvellir 1	x	x	x			
GK-017:035	03	Baðsvellir	x	x	x			
GK-159:102	04	Unnamed		x				
GK-157:058	05	Flekkuvíkursel	x	x				
GK-238:020	06	Helgusel	x	x	x	x	x	
GK-238:022	07	Mosfellssel	x	x	x		x	
GK-224:057	08	Nesssel	x	x				
GK-175:034	09	Vífilsstaðasel	x	x	x	x	x	x
GK-009:032	10	Selsvellir 2		x				
GK-343:014	11	Svínadalur	x	x		x		

What gives a better impression of temporal complexity at this stage in the analysis is the main structural phasing for each site (see Table 8). For example, there were five sites with only a single phase of construction; three sites with two phases; and a single site with three. It is possible that the last-mentioned site (Helgusel - site 06) had a more diverse use and might have been occupied all year around at some point during its lifespan. The sites with two phases of use may all have been continually used and occupied as shielings. They displayed a different kind of investment in construction which might imply broad social value placed on the site. These differences sometimes even occur within the same shieling at different periods. For example, site 02 (Selvellir) had a well-constructed earlier phase – with a stone wall and some indications of wood paneling – while the later phase consisted of poorly shaped turf and upcast.

***Table 8**. The dating of excavated sites, and the number of main "use phases"*

Site ID	No.	Name	Post-dates	Pre-dates	Use phases
GK-001:052	01	Sogasel	Pre-13th c	Uncertain	2
GK-009:012	02	Selsvellir 1	ML-1226	Post-1500	2
GK-017:035	03	Baðsvellir	Pending	Uncertain	1
GK-159:102	04	Unnamed shieling	/	/	/
GK-157:058	05	Flekkuvíkursel	Pending	Uncertain	1
GK-238:020	06	Helgusel	Pending	Uncertain	3
GK-238:022	07	Mosfellssel	K-1500	Uncertain	1
GK-224:057	08	Nesssel	Pending	Uncertain	1
GK-175:034	09	Vífilsstaðasel	Pre-13th c	Uncertain	2
GK-009:032	10	Selsvellir 2	/	/	/
GK-343:014	11	Svínadalur	Pending	Uncertain	1

When looking at the location of the shielings various factors must be kept in mind, e.g. the distance from the farm, vegetation, access to water, shelter from weather etc. (see further discussion in WP1 and WP3). In 2022 sample, the shielings were largely located above the farm (on a hillside) or in off-valleys, often on slightly less fertile ground than the farms. In one of the two valleys explored in 2022 (Hörgárbyggð) evidence was found that most of the shielings were built up on what would have been a fairly barren ground, on top of gravel or screes, and may in fact have been a deliberate attempt to cultivate/enhance the vegetation in the area. No evidence was found of similar activity in 2023. About a half of the shielings examined in 2023 were in the volcanic belt of the Reykjanes peninsula (see Fig. 7). There the shielings were most commonly located in vegetated patches/fields between lava stretches (see sites 02, 03 and 010) or in vegetated patches in actual craters or dents in the lava (see sites nr. 01, 04-05). On of the biggest setbacks in shieling usage in the Reykjanes peninsula was limited access to water and that, combined with the fact that the uplands from the

farms were largely lava fields with limited grazing areas, resulted in limited options for the location of the shielings. Therefore, they were often clustered together in the best patches/grazing areas. An example of this is Selsvellir (site 02 and 10) belonging to the church of Staður. The shieling there was used by the church farm for centuries but by the second half of the 18th century the shieling had started to be used by all the farms of the Grindavík area (apart from the farm of Hraun) to the dismay of the owners of Seljavellir. The reason for this was both erosion of other grazing areas and the fact that unlike many other grazing areas, Selsvellir had a small spring running through the area. In Seljavellir many ruins of buildings can still be seen in two locations. In Sogasel (site 01) there are also written references of at least four different farms using the area (additional to Krýsuvík the farm Kálfatjörn and Þórustaðir in Vatnsleysustrandarhreppur that previously had a shieling elsewhere used the shieling for a while - and later also the farm of Bakki).

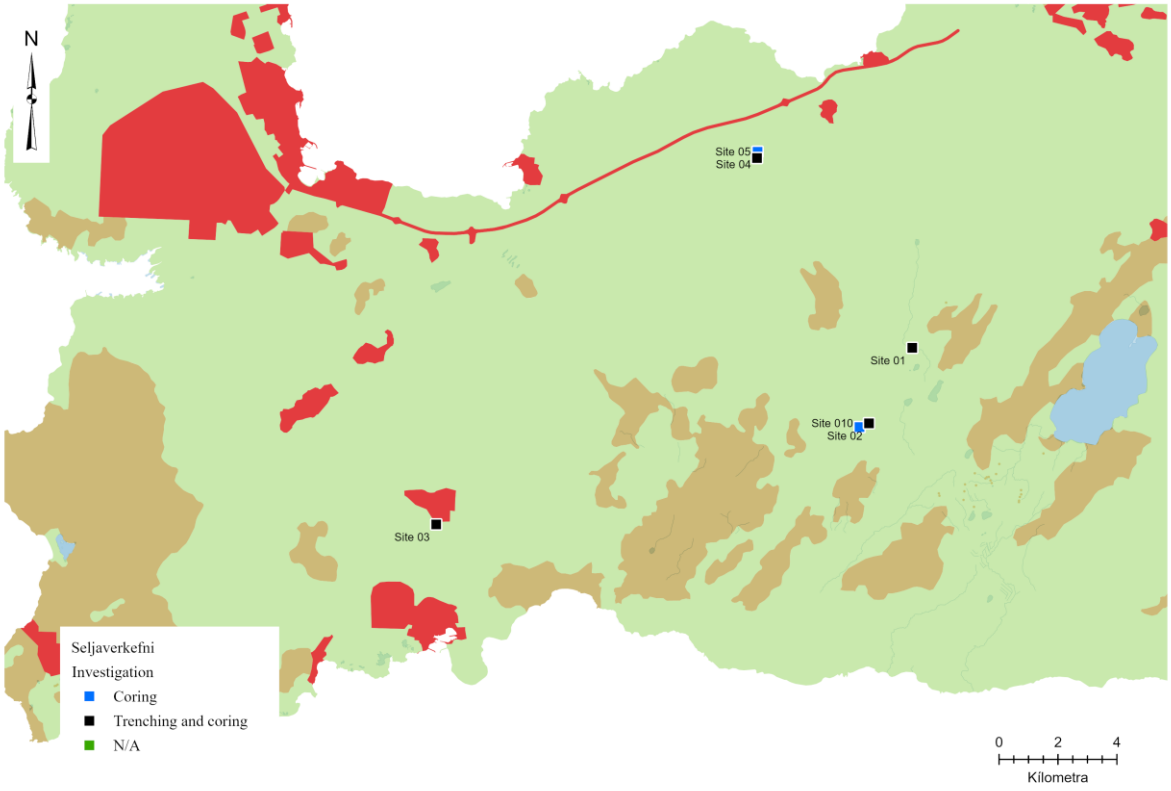


Fig. 7. *Location and numbers of trenches excavated/cored in Reykjanes in 2023*

Five shielings north of the Reykjanes peninsula were examined (Fig. 8), in and around Mosfellsdalur. The shielings in the northern side of the research area in 2023 were on more fertile ground than the shielings in Reykjanes and usually had good access to springs/water (see site 06-09 and 11).

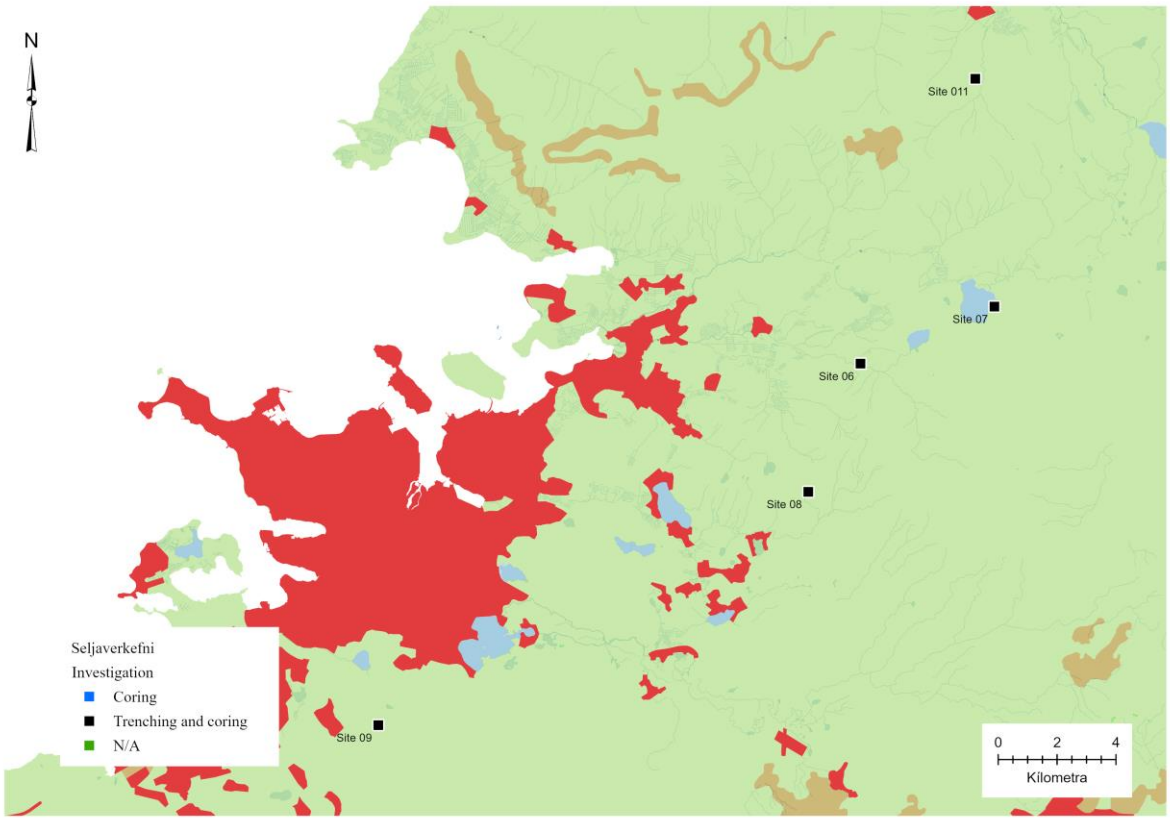


***Fig. 8**. Location and numbers of trenches excavated/cored south of the capital area, in Mosfellssveit in 2023*

The clear difference in shieling location, as well as access to water in the sites examined in 2023, therefore, suggests that there is a large degree of regionality at play in determining the development and type of shieling. In 2023 there was a distinct difference between the shielings in the west (in Reykjanes peninsula) to those in the east and north as discussed above. In 2022 there was a difference between the two valleys studied. In the context of other shieling studies, as well as the one being presented here, is that this leads us to consider, and offer an initial conclusion that will be explored further in the final year of the project, that a universal and consistent pattern in shieling development and use across the whole of Iceland is unlikely to appear. Rather the approach ought to be tied to the specific landscape or region that a series of shielings are situated within, as well as the dating and 'use phase' of each shieling. For example, the landscape context will shape the kinds of materials available to use in shieling construction (such as access to good turf and/or stone, or the requirement to 'bring in' resources, or construct poorly made structures from upcast floors and soil). In terms of dating, one question that has arisen is whether there is a tendency for the earlier 'shieling' structure to be better made creating a more stable 'foundation' for subsequent rebuilds. Whether there is a correlation between construction and use in this way is a question, alongside others, that will be explored further over the next year.

Finds
Given the limited scale of excavation in 2023 (i.e. trenching), not many finds came to light this summer. Altogether seven objects were recovered, all iron objects, mostly nails. Four nails were found in Selsvellir (site 02), two in Vífilsstaðasel (site 09) and one iron cap of an object (possibly an iron head) in Mosfellssel.

Other research at the sites/Environmental sampling
As in 2022 various environmental samples were collected in 2023 with the aim of improving our understanding of the range of activities taking place at the shieling sites.

In 2023 samples for archaeoentemology were taken from the floor layers from site 01, 06, 07 and 09 (Sogasel, Helgusel, Mosfellssel and Vífilsstaðasel) in the hope that 2-3 samples could be processed. As with last year the samples are being processed by Hrönn Konráðsdóttir who will return her final report in the early spring of 2024. Three micromorphological box samples were taken in 2023, all from floor layers in Vífilsstaðasel (site 09). They were sent to the Laboratory for Geoarchaeology at the University of Cambridge early-September 2023. The lab has set the estimated time of return for ready thin-sections before the end February 2024. The thin-sections from 2023 will be analyzed by Sólveig Guðmundsdóttir Beck in the spring/summer of 2024.

Additional to the environmental sampling done in 2022-2023 further sampling for eDNA and OSL was done in 2023. This was made possible through two grants received from Fornminjasjóður 2023. The grant for eDNA sampling was conducted at selected shieling sites while the other enabled experiments with the applicability of the optically stimulated luminescence profiling and dating (OSL P-D) methodology to the Icelandic soils.

The OSL work was done by Tim Kinnaird of the School of Earth and Environmental Sciences at the University of St Andrews. One of the main benefits of OSL is that it dates quartz or feldspar in the soil, so archaeologists do not need ecofacts or artefacts to be able to date sites. Samples were taken from six sheiling sites: Sogasel, Selsvellir, Baðsvellir, Helgusel, Mosfellssel and Vífilsstaðasel in Mosfellsdalur (Site 01, 02, 03, 06, 07 and 09). The samples were exported to England and Dr. Kinnaird did the processing of the samples in the fall of 2023. The final report about the experiment was returned before the end of 2023 (see attachment 7). Overall, the results were disappointing, but samples from Helgusel and Mosfellsel were marginally better and do not rule out the application of OSL to other localities in Iceland; the screening results from Helgusel show that the bulk sediment does contain a dosimeter that registers an age-signature, although not in the quantity required for more formal quantitative dating.

In the case of eDNA sampling an application for two-year research was applied for to Fornminjasjóður. The first year was directed to collecting the eDNA samples from selected shielings in southwestern Iceland and the second year to analyse the collected samples and write reports/articles. The eDNA work was led by Dr. Elena Zavala (Globe Institute, University of Copenhagen) who will do the analyses of the samples in 2024 given that the grant application to Fornminjasjóður for this year is successful. In 2023 eDNA samples were collected from four of the shielings: Sogasel (site 01), Helgusel (site 06), Vífilsstaðasel (site 09) and shieling in Svínadalur (site 11) during the field season. Altogether 56 samples were taken from both cultural layers and homefields around the shielings. The aim of the eDNA work is to explore in more detail than has been possible until now the presence of animals in and around shielings in the area by periods. In later centuries sheep

dominated the shieling economy but various evidence suggests that a more mixed/varied livestock was present in shielings in earlier centuries. Exploring the evidence of the eDNA in shielings could play a vital role in determining the usage of the shieling and their role for the economy of the farm unit (see further in attachment 8).

WP3 – Progress report

Egill Erlendsson og Snædís Sunna Thorlacius

The focus of WP3 is designed to tackle specific activities, site use history, as well as their environmental context and contemporary resource base. The results of WP3 will be strengthened through comparison with historical and spatial data: do the paleoenvironmental data indicate continuity in the use of shieling sites? What specific activities took place at the shielings, and did they change over time? If so, how? Can the available natural resources, e.g. meadows and plants, be scored in terms of nutritional return for inhabitants and animals, as a measure of site feasibility for use? What are the differences and similarities between the environments and activities at shieling sites in the various focus areas of the palaeoecological research?

People in WP 3 over the course of 2023 have been Egill Erlendsson (EE, PL), Julia Rose Esch (JE, PhD student – left the project in July 2023), Snædís Sunna Thorlacius (SST, PhD student – replaced Julia Esch in November 2023), and Scott John Riddell (SJR, Post-doc, 4 months). The role of SJR was to assess the various data from North Iceland to organise a joint publication. Also to evaluate and start processing of the data that are available from shielings of Reykholt in Borgarfjörður as part of collaboration with Dr. Guðrún Sveinbjarnardóttir (see below). This is an important addition to the project.

Overall, a satisfactory progress has been made within WP 3 during the year 2023, especially given the interruption of a PhD student leaving the project around the middle of 2023 and having to hire a new PhD student, which created a hiatus in the flow of the WP. Below we provide an account of the progress made. This is done on the basis of the different work items within the WP. They are Fieldwork, Chronology, Palynology, Lithology. The combined data from those work items constitute the ingredients of publications.

Fieldwork: EE and JRE took part in the fieldwork of 2023 in the Reykjanes peninsula and in and around Mosfellsdalur. It was decided against taking samples for WP3 because of uncertainty regarding the PhD student. As it turned out, JRE would leave. Therefore, SST will conduct the fieldwork alongside EE in the summer of 2024, as part of her necessary training. During the fieldwork period, EE collected samples from natural soil sections to serve a spin-off project that revolves around soil aDNA analyses (see attachment 8). These were collected at three sites, Sogasel, Helgusel and Vífilsstaðasel.

Chronological work: We have established a complete geochronological framework for all environmental samples collected in 2022, at Sökkusel and Hámundastaðasel in Svarfaðardalur. This has been performed using the Electron Microprobe at the Earth Science Institute, UI. To supplement the tephrochronological record, three radiocarbon age estimates on wood fragments embedded in the peat have been processed at the ETH radiocarbon laboratory in Zurich.

Table 9. *Tephra layers at Sökkusel and Hámundarstaðasel*

Source	Eruption year	Nomenclature	Sökkusel	Hámundarstaðasel
Hekla	1766	H-1766	X	X
Hekla	1300	H-1300	X	X
Hekla	1104	H-1104	X	
Vatnaöldur	877 ± 1	LTL	X	X

Palynological work: Prior to leaving the project, JRE had advanced well with the analysis of pollen from Sökkusel, which she processed into a pollen diagram to display at the ESEH conference in Bern, Switzerland in August 2023 (https://www.eseh2023.unibe.ch/conference/). SST repeated the analysis after she joined the project. She has now analysed 24 pollen samples which make up a near-complete record of vegetation history for the Sökkusel site (Fig. 9). The key point of interest here is the continued presence of woodland throughout the study period. This presence can be divided into four sub-periods: 1) an initial period of stability in which *Betlula pubescens* domintates (52-30 cm), 2) a period dominated by *Salix* (30-20 cm), 3) a period in which Poaceae and Cypereaceae dominate, but with *Salix* and *Betlua* ever-present, and 4) lastly a period of renewed dominance of *Betlua nana* (dwarf birch). The pollen diagram depicts a compelling story of vegetation change under the influence of land-use, presumably mainly grazing, associated with operation of the Sökkusel shieling. The palynological data show responses to the onset of grazing, management of woodland resources while in operation and, finally, a prominent response to the abandonment of transhumance activity in the form of shrub (*Betula nana*) and heathland (mólendi) development which is a primary characteristic of Iceland's modern landscape.

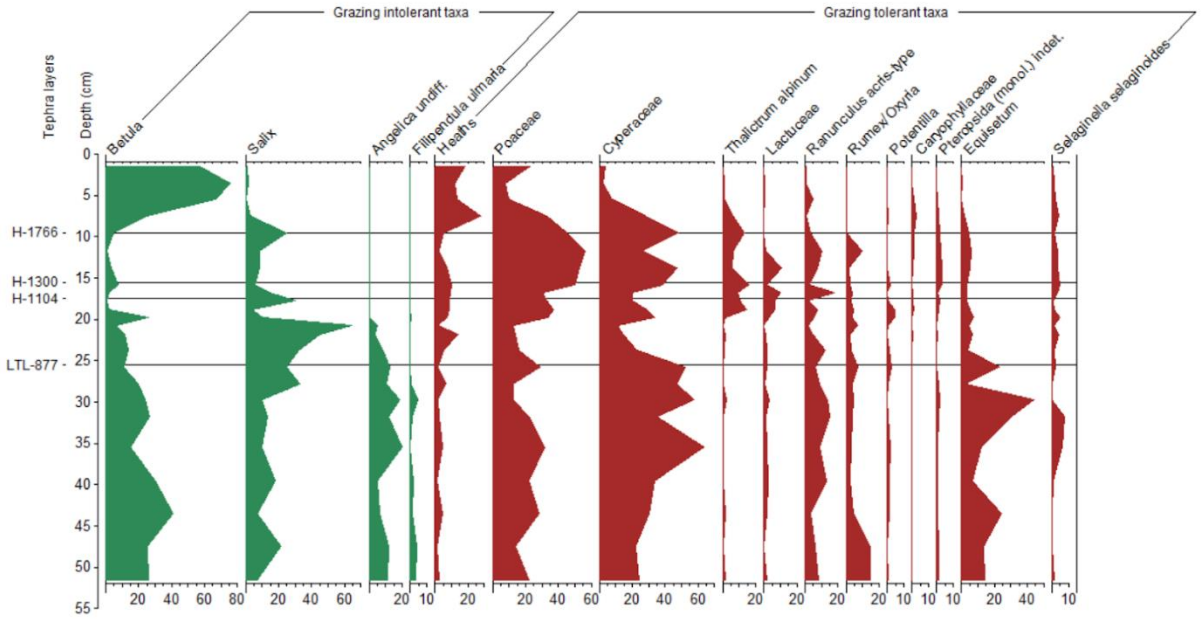


Fig. 9. *Pollen percentage diagram from Sökkusel. Selected taxa are displayed.*

SST has begun analyzing pollen from the second North Iceland site, Hámundarstaðasel.

Lithology: The analyses of soil properties consist of a range of proxies which are used to assess landscape stability and the influence of land use and soil mobilization upon Histosol. We have completed the XRF analyses of the three profiles collected at Sökkusel (2) and Hámundarstaðir (1). The XRF data (Figs. 10, 11 and 12) have been used to determine the locations of minor tephra horizons within the peat/soil strata, which has proven invaluable to construct chronologies for the profiles. To complement the XRF data, we have measured the peat profile at Sökkusel for standard lithological proxies, percent organic content and dry bulk density (Fig. 13). The information at hand, and adding palynological data from Hámundarstaðir, will form the backbone of Snædís' first

paper for her PhD thesis. She is also using her Sökkusel data for a joint publication between all WPs (see attachment 9).

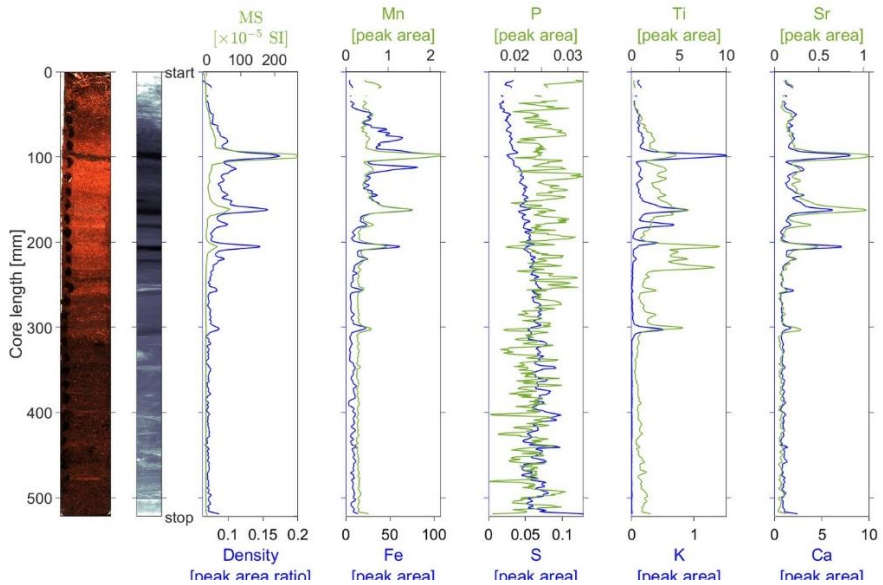


Fig. 10. *XRF analysis from Sökkusel (Sakka 1, peat section).*

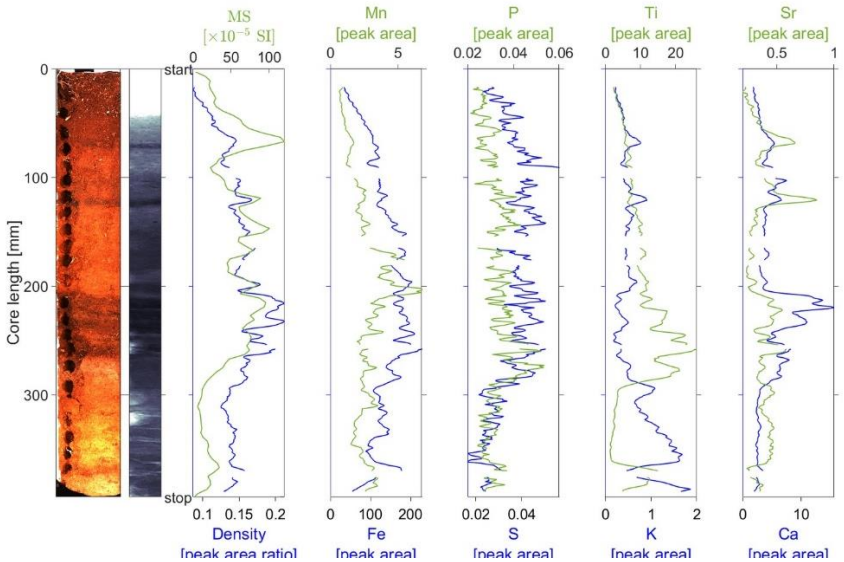


Fig. 11. *XRF analysis from Sökkusel (Sakka 2, soil section).*

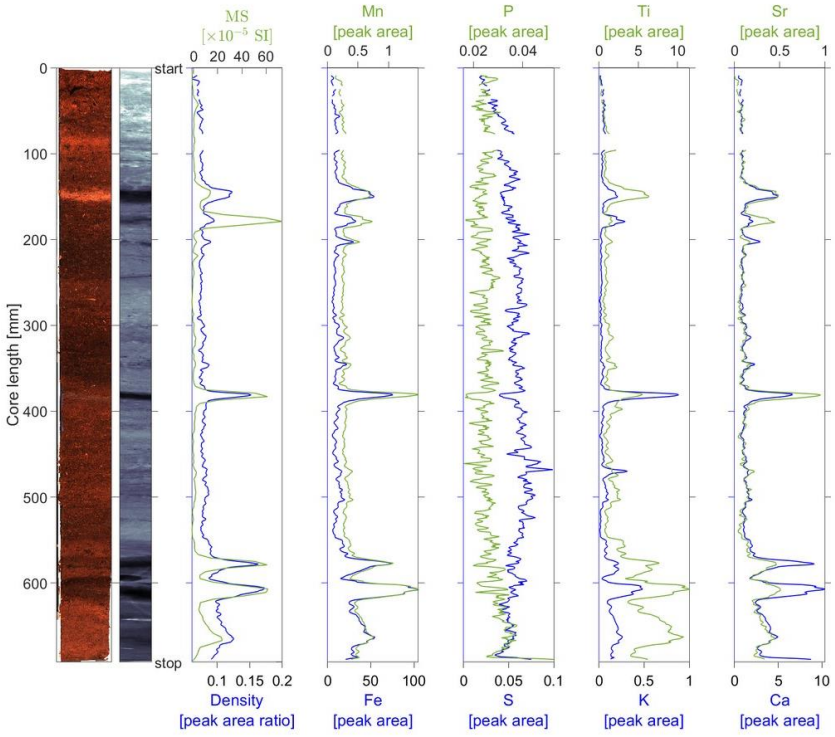


Fig. 12. *XRF analysis from Hámundarstaðasel.*

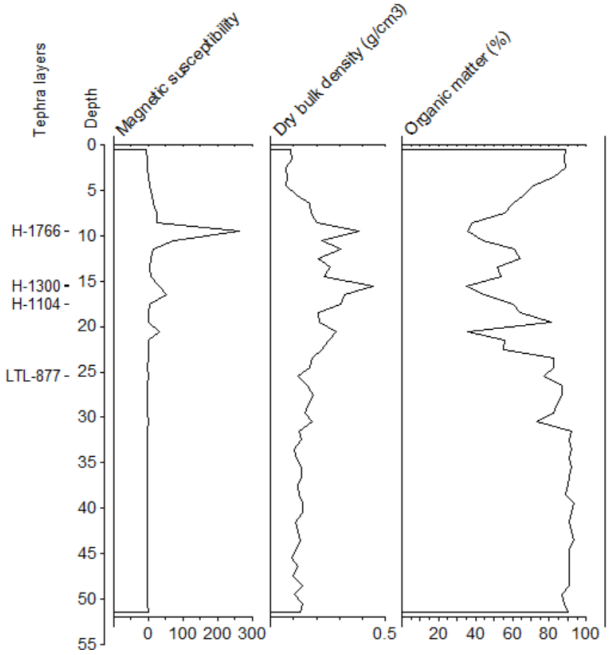


Fig. 13. *Soil properties proxies from Sökkuel.*

Milestones reached

The proposed milestones have largely been met. The group has started processing the research data into publications, both within the specific WPs or jointly. These are provided in attachments to this report (attachments 4, 9, 10, 11).

A conference session was held at the ESEH conference in Bern, Switzerland, where Gylfi Helgason, Árni Daníel Júlíusson and Julia Rose Esch delivered presentations based on the data accumulated within the TransIce project. Information about the conference is here: https://www.eseh2023.unibe.ch/conference/, and the presentations can be found in attachments 1, 3 and 12.

Fieldwork for WP2 is completed.

A large meeting (workshop) with members from all WPs was held on December 13, 2023, where the group assessed the work so far and the data that had been accumulated.

Otherwise, a description of the achievements of each WP is outlined below:

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.

WP1

An article manuscript on transhumance practice in Iceland, Italy, UK and Spain by five shieling scholars from Spain, Italy, Great Britain and Iceland has been in the process of writing during the year, with contributions from three participants in the TRANSICE project. The writing is now at the stage of a first draft finished, and the process of reviewing and rewriting the draft is about to start. The article will be submitted to an appropriate publication for a review (see attachment 10).

We have also begun drafting a paper based on our analysis from the GIS data and the historical research on DI and Jarðabók. It will centre on analysing the landscape of shielings in Eyjafjörður, N-Iceland, utilising data from GIS/Ísleif and historical documents to consider the socio-economic part of the shieling system in two valleys in North-Iceland (see attachment 4).

During the summer three participants in the project attended the ESEH conference in Bern, Switzerland. The conference was dedicated to ideas and uses of mountains in the past and challenges. Our proposed session titled "Shieling Practices in the Arctics: Perspectives from Iceland" was accepted by the conference's organisers. The three participants, Á.D. Júlíusson and G. Helgason from WP 1, and J. Esch from WP3 and the then current PhD student of the project, all gave well-received talks, and their presentations can be found in attachments 1, 3 and 12 respectively. During this session valuable contact was made with Eugene Costello, a prominent shieling researcher on transhumance in Europe. Further talks and collaboration with Costello are scheduled in 2024.

We presented data and results from the project in other lectures. Á.D. Júlíusson gave a keynote lecture on the history of shielings at a conference in the Agricultural University of Iceland in Hvanneyri. This conference was organised by the Agricultural Museum of Iceland (see attachment 13). G. Helgason also gave a at FSI lunchtime seminar titled: "The TRANSICE project: preliminary

insights and prospects for future works". He introduced the project and talked about the usage of GIS to deal with seasonality and transhumance. He also presented some preliminary Ísleif analysis (see attachment 5).

Members of the WP also contributed data and post to reach general audiences at Twitter and the Facebook page of the project.

WP2
The progress of WP2 has been as planned. The fieldwork went according to plan and the post-excavation analysis is well on its way and will finish in the spring of 2023. Due to a delay in sample processing, the micromorphological analyses of 2022 will be finished in early 2024 and the processing of the samples taken in 2023 will be finished in summer of 2024. The archaeoentemology work is in progress and a final report is due in the spring of 2024.

For WP2 we published a detailed report about the field season of 2022 in the early spring of 2023 (see attachment 14) and a detailed report for 2023 is planned in the spring 2024.

The first publication of this part of the project is a chapter on three grazing systems in Iceland (including shielings) for a book called *A place for heathlands* published by University of Aarhus (edited by Mette Lovschal and Mark Haughton). The writing of the chapter is well advanced (see attachment 11). The WP2 team are also contributing to a joint article about Sökkusel, one of the shielings from the 2022 study, that will be ready for publication in 2024 (see initial working draft in attachment 9). The team has also contributed to the general outreach of the project through the Facebook and Twitter accounts of the project.

WP3
Julia Esch presented her results at the ESEH conference in Bern, Switzerland in August 2023 (see attachment 12).

Egill Erlendsson presented data from shielings in West Iceland in the context of the Black Death and its impact upon the Icelandic farming society, e.g. shielings (see attachment 15).

Members of WP3 contribute to a joint publication featuring the farm Sakka and Sökkusel in Svarfaðardalur (see attachment 9)

The team has also contributed to the general outreach of the project through the Facebook and Twitter accounts of the project.

https://twitter.com/Transhumice

https://www.facebook.com/search/top?q=%C3%BEr%C3%B3un%20seljab%C3%BAskapar%20%C3%A1%20%C3%ADslandi%20-%20transice

Changes to the research plan (if applicable)

Few changes have occurred in 2023 and none which negatively affects the overall aims, methods and proposed outcomes of the project. Mostly, this involves change in tasks among team members and slight delays in other specific tasks. Moreover, we have expanded the project through added external funding to support its financial grounding and methological scope, as oulined above. This involves analyses of aDNA sampling, attempt to improve temporal resolution of the study period through OSL dating, and establishment of collaboration with other scholars.

WP1:
Gylfi Helgason and Oscar Aldred will replace Gísli Pálsson work concerning GIS.

WP2:
No changes to the research plan.

WP3 and administrative items:
The progress of WP3 is on course and without significant changes to report, aside from a slight delay in the analytical work arising from a change of personnel in the PhD study and the resulting hiatus in the work of the WP. This causes a few months lag in all aspects of this work and movement of some parts of fieldwork in SW Iceland to the summer of 2024. As outlined in previous progress report, the PhD student (funded by own contribution) replaces the two MSc students originally proposed. The production of a paper from the N-Iceland material is delayed into 2024.

As part of the TransIce project and Snædís' PhD study, we have established collaboration with Dr. Guðrún Sveinbjarnardóttir, who is a leading expert on transhumance in Iceland. She has conducted historical and archaeological research on shieling activities by the major medieval farm Reykholt in Borgarfjörður. We seek to exploit this opportunity to use and expand upon palaeoenvironmental work that has already taken place as part of the Reykholt project as part of Sveinbjarnardóttir's work in Borgarfjörður. This will form part of the PhD work of Snædís Sunna and the work of the post-doc Scott Riddell, who will provide expert analysis on all study sites.

As regards administrative items, the writing of a joint paper on Sökkusel was proposed for 2023. This work has begun (see attachment 9). We will construct a final draft of the paper in 2024.
A post-doc was hired for 4 months instead of 5, this creates leeway for extended (5 month) post-doc work in 2024.

Invoice for insect analysis in 2023 is yet to arrive.

Invoice for processing of XRF data is yet to arrive.

CONTINUATION OF THE PROJECT IN THE NEXT GRANT YEAR

Describe the research plan and milestones for 2024. Foreseeable changes to the proposed research plan, management and/or participation must be explained.

Highlights of the research plan

WP1:
Apropos WP1, we aim to A) further analysis later historical sources collected and catalogued by the history Student, S.M. Ragnarsdóttir, and prepare for publication with other WPs B) We also aim to start writing the introduction chapter to the translation of Egon Hitlzer's book. It will feature comparison between Icelandic and North-Atlantic transhumance systems and recent developments in shieling research in this part of the world. We have made a valuable contact with shieling scholars in the North-Atlantic, e.g. Euguene Costelle. C) Continue supporting, including GIS support, and supervising the MA student, Þóra Briem regarding her dissertation on shielings found in Jarðabók D) Concerning GIS analysis, we will start with environmental analyses in cooperation with WP3 and prepare the data to meet the FAIR standard and it can be made accessible when complete and present the data at international and domestic conferences E) Complete Ísleif analysis, make some of the results easily readable in maps, and prepare for publication with historical data on the socio-economical aspects of transhumance F) Provide historical and landscape perspective and prepare for publication with other WPs in an interdisciplinary overview article by all participants that will be submitted in Norwegian Archaeological Review, in accordance to the project description.

WP2:

The aim of 2024 is to finish the last remaining data processing and writing up the results from the field season of 2023, as well as finishing both the mircroporohological and the archaeoentemological work of the project. Additionally the last year will be dedicated to a review of the work of WP2 with the aim of identifying (through comparative assessment) the historical, archaeological and environmental synergies, such as common themes, e.g. site placement (GIS and in-the-field observations), inter-site analysis (with other sites, including farms and other shielings), measured environmental impact on sites where samples were taken (pollen, eDNA), intra-site analysis (of the sites themselves) and site morphologies and dating across the project, and an overview of shieling dating. We will also review this work in the context of data from other regions/projects, with the aim of developing narratives about the use of shielings: daily, seasonal, year-on-year (short- and long-term) and the temporalities of transhumance in Iceland. Through this we will be addressing the main research question on the rise and fall of the transhumance system in Iceland and looking into how communities, environments and cultural systems might have contributed to that development.

WP3:
Research of the environmental context in 2024: **1)** Work of the PhD student Snæsdís Sunna has commenced. We aim to finalise the pollen analysis of samples from both Sakka and Stóru Hámundarstaðir in first half of 2023 and to prepare a manuscript for submission as part Snædís' PhD thesis. **2)** Fieldwork for SW Iceland takes place in June 2024. **3)** Measurements of lithological variables and tephrochronology for SW Iceland is to be completed by end of 2024. **4**) EE hires a post-doc on a five month contract (salaries applied for in 2023 (1 month) and 2024 (4 months) to

undertake processing and synthesizing of the diverse data gathered by the project in North and SW Iceland to prepare for publication in an interdisciplinary-focused journal. **5**) The group aim to organize a session dedicated to transhumance at the LAC conference in Madrid in June 2024 (https://lac2024.com/). **6**) EE organizes a project workshop in spring 2024.

Milestones

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

The key milestones listed for 2024 and those moved from 2023 to 2024 in the project plan are:

1) Finish a joint paper based on data from North Iceland (all WPs).
2) Initiate a joint paper based on data from SW Iceland (all WPs).
3) Initiate a joint paper which synthesizes the findings of the project (all WPs).
4) Contribution from all WPs in an international conference/workshop (all WPs).
5) Advance the publication of Hitzler's book "Sel" (WP1).
6) Graduation of an MA student in Archaeology/History (WP1).

Foreseeable changes to the research plan (if applicable)

WP1:
Gylfi Helgason and Oscar Aldred will continue to replace Gísli Pálsson in GIS related work.

WP2:
No foreseeable change in the research plan.

WP3:
As neither of two MSc students could be found to work within the project, the proposed milestones of MSc graduations in 2023 and 2024 will not be reached. As explained above, this problem has been circumvented by the hiring of a PhD student (first Julia Esch, later Snædís Sunna Thorlacius) via funding from the UI doctoral fund. Although causing a little delay in the progress of WP3, this will not affect the outcomes of the project negatively, rather this arrangement will boost its outputs and prestige.