

Excavations at Skútustaðir, N. Iceland 2013

Preliminary Report



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Megan T. Hicks, Adolf Friðriksson, Mjöll Snæsdóttir, Gisli Pálsson, Guðrun Alda Gísladóttir, Cameron Turley, Ágústa Edwald, Sant Mukh Khalsa, Brenda Prehal, Frank Feeley, Scott Schwartz, Elisheva Charm, Katie Grundtisch, Andrea Torvinen, Thomas H. McGovern, Baldur Danielsson, Pétur Ingólfsson, Unnsteinn Ingasson and Garðar Guðmundsson

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Excavation History and Summary of Work at Skútustaðir in 2013

Megan Hicks

The Lake Mývatn basin is an elevated, inland region in North Iceland and known to be a settlement nucleus since AD 871. The region has been a focal point of archaeological and paleoenvironmental projects for over two decades including the *Landscapes of Settlement Project*¹ and *Human and Social Dynamics in Mývatnssveit*². Such work has been interdisciplinary and collaborative from field research through analysis and publication (McGovern et al. 2007). The majority of research in the region has focused on settlement history, paleoecology and paleoeconomy of the first settlement through 1300. In 2007, additional NSF *International Polar Year* funding enabled North Atlantic Biocultural Organization (NABO) teams to survey the Mývatn area for a settlement with a long-term chronology (McGovern 2007, Vésteinsson 2008). One of many farms tested during the 2007 survey was Skútustaðir; named as an early farm in *Reykðæla Saga* (ÍF X). Coring results showed that the midden layers were well preserved, nearly two meters deep in some areas and separated by several identifiable dateable volcanic tephra layers providing excellent chronological relationships. Excavations of Skútustaðir began with a year of test trenching in 2008 and crews moved on to open large excavation areas in 2009, 2010, 2011 and 2013. The project has unearthed well-preserved continuous evidence of the farm's economy between the Viking age, the middle ages, the period of modernization; in total, AD 871 through approximately AD 1910.

The most recent 2013 excavation was supported by the U.S. National Science Foundation Grant *Centennial Scale Human Ecodynamics in Skútustaðir, Mývatn Northern Iceland* (PIs Thomas H. McGovern and Megan Hicks (CUNY) (NSF Office of Polar Programs (OPP) Grant 1203286) and supported by the Comparative Island

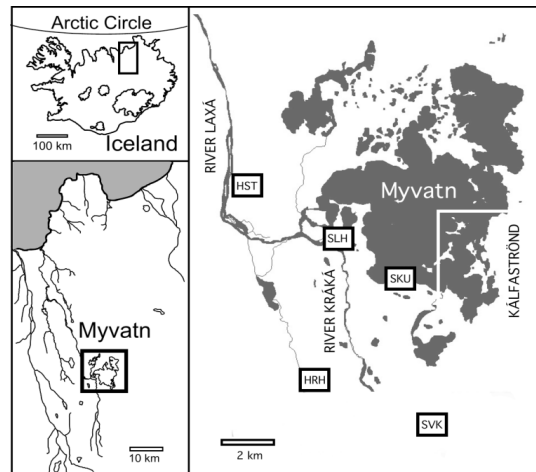


Figure 1 Location of Skútustaðir

¹ *Landscapes of Settlement Project* (McGovern et al. 2007, full reports available as download from the NABO website www.nabohome.org)

² BCS 0527732. AOC: Human and Social Dynamics in Mývatnssveit, Northern Iceland, from the Settlement to the Present. PIs: A.E.J. Ogilvie; T.H. McGovern; J.H. Ingimundarson; I.A.Simpson.

Ecodynamics OPP Grant 1202692) (PIs McGovern, Vésteinsson and Hambrecht). Additional postexcavation support was provided by the Leifur Eiríksson Foundation. Megan Hicks and Adolf Friðriksson (FSI) directed the excavation. The excellent crew of 2013 included graduate students: from CUNY, Frank Feeley, Cameron Turley, Sant Mukh Khalsa, Brenda Prehal, Scott Schwartz, undergraduate Elsiheva Charm; and postgraduate researcher from the University of Aberdeen, Ágústa Edwald. Graduate students Andrea Torvinen and Katie Grundtisch joined the team from the University of Arizona and Washington State University, respectively. Gísli Pálsson from FSÍ also joined the excavation team.

The purpose of the 2013 excavation was to recover additional animal bone, artifacts and botanical samples - from the Middle Ages, roughly AD 1000-1500. To accomplish this, an excavation area E4, a 5 x 5 m trench, was opened adjacent to a previous area E3, investigated in 2010. It was hoped that the new area E4 would contain a continuation of the same deposits of previously found material dating to the Middle Ages. Midden material including animal bone, hearth sweepings, discarded household objects, and discarded turf from this phase were indeed identified and samples recovered. Density of anthropogenic debris increased below the V1477 tephra. In addition, collapsed turf and stone structural remains were encountered and were left unexcavated - their disuse was provisionally, albeit broadly, dated to before the fall of the 1410 Veiðivötn volcanic tephra. An additional test excavation area was opened, Area I, which was a 2 x 3 meter test trench slightly to the south of the hillcrest and of interest because of the dense Early Modern material present. Both excavation areas were exclusively targeting midden material including samples of bone, archaeobotanical remains and artifacts and successfully recovered samples from every phase. The confirmation of the presence of a structure at least as old as the Middle Ages provides a potential subject for future field investigations.

Zooarchaeological analysis of animal bone from the well stratified middens at Skútustaðir is ongoing as a part of the Ph.D work of Megan Hicks (CUNY and a summary of ongoing work is presented in this report (see also Hicks 2010, Hicks et al 2014 in review, Hicks 2014 in press for detail). The archaeological evidence of this long-term settlement offers a chance to understand the economies against a backdrop of associated ecological conditions well studied in Mývatn, and alongside excellent comparative zooarchaeological data, while extending such work toward the early modern period which is lesser-known in the region. Two in press publications completed this year document areas of ongoing intensive investigation and analysis. The first investigates the sustainable long term egg collection and management of wild birds in Mývatn (Hicks et al. 2014 in review). This work is being carried out with collaborators from The University of Aberdeen, The University of Iceland and the Mývatn Research Station. The archaeofaunal data is further being mobilized toward understanding the impacts of modernizing trade on livestock management at the farm and in its lakeside district. This work uses zooarchaeology and written records to document changes in the management of livestock and related resources as well as to relate the above to sociopolitical situations, community governance and agency, changing long distance markets, and political/economic transformation (Hicks 2014 in press).

The excavations at Skútustaðir have run side by side with a long-term community collaboration including partners from NABO and the Thingeyingar Archaeological Society (in Icelandic, Hið þingeyska fornleifafélag) and The Kid's Archaeology Project, Iceland (KAPI: in Icelandic, Fornleifaskóli barnanna). Outdoor and indoor projects, crafted each year by archaeologists, educators and community leaders focus on sharing archaeological thinking, discovery, methods, and techniques while emphasizing ecological interconnections and landscape. In 2013, the partnership created three days of programming with elementary and middle school aged students on-site as well as a very successful mock excavation and a well-attended archaeology open house and celebration.

The present report is a preliminary field report with sections describing the excavation, zooarchaeology, and artifact analysis. Discussion of educational and outreach activities was provided by local specialists Unnstein Ingasson, Baldur Danielsson and Pétur Ingólfsson. Excavation reports pertaining to other project years as well as zooarchaeological reports can be found online at *nabohome.org* and *instarch.is*. They include: Vésteinsson (ed.) 2008, Edwald and McGovern 2008, Edwald 2009 Hicks et al. 2011, Hicks et al. 2012.

Many thanks are extended to the contributors mentioned above as well as Gerður Benediktisdóttir and Þorlákur Jónsson who so kindly have let us excavate beside their family home since 2008. Special thanks are also due to Árni Einarsson; beyond extensive scientific collaboration, he has kindly been a liason in many ways for archaeological fieldwork in Mývatn.

Öskuhaugsrannsóknir á Skútustöðum í Mývatnssveit sumarið 2013 – samantekt

Adolf Friðriksson

Fornleifauppgröftur sem fram fór á Skútustöðum sumarið 2013 er liður í rannsóknum er hófust þar árið 2008. Markmið rannsóknanna er að afla efniviðar í athuganir lífsháttum fólks fyrr á tíð.

Í lok síðustu aldar var sett á laggirnar stórt rannsóknarverkefni í því augnamiði að afla nýrrar vitneskju um samspil manns og náttúru (Landscapes of Settlements). Rannsóknin er liður í samstarfi Fornleifastofnunar, háskólans í New York (CUNY), samtökum fornleifafræðinga og fornvistfræðinga við N-Atlantshaf (NABO) og fleiri aðila. Stór liður í þessu samstarfi er fölginn í rannsóknum á öskuhaugum. Húsarústir og grafreitir eru jafnan hin hefðbundnu viðfangsefni fornleifafræðinga, en öskuhaugar eru líka fornleifar. Á öskuhauginn fer heimilisúrgangurinn, sem er í augun fornleifafræðingsins merk heimild um hversdagslegt líf íbúanna. Þar finnast bein húsdýra, en þau endurspegla ýmsa þætti úr efnahagslegri sögu þjóðarinnar, svo sem bústofna og mataræði, og einnig veiði jafnt sem nytjar, fisk, fugl og jafnvel egg. Sjálf askan er vitnisburður um hvernig eldsneyti var nýtt til eldunar og upphitunar á húsakynnum. Auk alls þessa er algengara að finna gamla gripi í öskuhaugum fremur en annarsstaðar. Úr sér gengin, brotin áhöld og gripir lenda á haugnum ásamt öðrum úrgangi.

Á síðustu árum hafa leifar öskuhauga m.a. verið athugaðar á Sveigakoti, Hríshéim og Hofstöðum í Mývatnssveit og var gerð forathugun hjá Skútustöðum 2007. Borkjarnar sýndu að á Skútustöðum leyndust stórir öskuhaugar, allt að 2 metra djúpir, með þykkum lögum af beinum, ösku, kolum og jafnframt eldfjallagjósku frá mörgum eldgosum á sögulegum tíma. Niðurstaðan sýndi að öskuhaugarnir á Skútustöðum geymdu heimildir um 1100 ára búsetu í landinu. Árið 2008 voru þrjú svæði (E1-2, D, F) valin til frekari rannsókna, árið 2009 voru tvö stór svæði (G, H) opnuð og grafin upp og tvö svæði (H, E3) rannsökuð 2010. Árið 2011 var lokið við rannsókn á mjög stóru svæði (H). Hlé var á vettvangsrannsóknum sumarið 2012.

Markmið sumarsins 2013 var að hefja rannsóknir á tveimur nýjum reitum (E4 og I). Reitur E er norðan og samsíða reit E3 sem rannsakaður var 2010. Svæði E er í raun suðurhlíð bæjarhólsins sem liggur beint norður af íbúðarhúsinu á Skútustöðum III. Hafði fyrri rannsókn á svæðinu gefið góða von um frekari beinafundir. Nýtt svæði (I) var opnað ofan á þeim stað sem nú er hæsti punktur á leifum bæjarhólsins. Er það nyrsta svæðið sem rannsakað hefur verið, og liggur á milli G og E.

Sumarið 2013 tókst að ljúka rannsókn á reit E og grafa þar til botns, þar sem elstu mannvistarlögin er að finna. Svæðið er all stórt, 5 x 5 m og voru öll jarðlög grafinn undir mannvistarlögum. Úrgangslögunum var skipt upp í tímabil til samræmis við legu þekktra gjóskulaga, þ.e. V1717, V1477, V1410, H1104/1158 V940 og V871. Ólíkt rannsóknum á svæði E árin 2008 og 2010, þá fannst heldur minna af dýrabeinum eða gripum í flestum jarðlögum. Þar voru engu að síður ruslalög sem lágu frá háhólum og niður til suðurs, eftir náttúrulegum halla og ofan í gjótur sem þar eru. Neðst í bæjarhólum ganga sprungur djúpt ofan í hraunið. Í gjótunni sem grafin var fram á svæði E var mannvistarlag sem gaf til kynna að gjáin gæti hafa verið notuð sem e.k. þró fyrir úrgang úr mönnum eða skepnum. Efst á reitnum, meðfram norðurbrún rannsóknarsvæðis og u.þ.b. hæst á hólum kom fram veggur sem hefur verið hlaðinn úr torfi og hraungrjóti. Þar eð rannsóknin snerist um öskuhauginn var rannsóknarsvæðið minnkað og dregin mörk sunnan við veggjarstúfinn. Ekki var kunnugt um þessa byggingu og gætu þar verið eldri leifar bæjarins eða útihúsa frá bænum. Mannvirkið er fornt, eða frá miðöldum að minnsta kosti, enda ekki lengur í notkun þegar gjóskulag frá 1477 féll.

Á svæði I var opnaður reitur, 2 x 3 m. Efst voru ummerki frá 20. öld, brot úr leir og gleri. Er svæðið talsvert raskað. Neðar voru þunn mannvistarlög.

Rannsóknin sumarið 2013 á Skútustöðum hefur bætt bæði beinum og gripum við heimildasafnið og er það nú að taka á sig heildarsvip. Framundan er frekari úrvinnsla þessara gagna, en niðurstöður vettvangsrannsókna 2013 eru birtar í þessari skýrslu.

Löngu ljóst er orðið hvaða kosti öskuhaugarnir á Skútustöðum hafa sem rannsóknarvettvangur. Skútustaðir eru ekki einungis þekktur sögustaður, heldur hefur þar verið óslitin búseta í 11 aldir. Þar er að finna mörg, skýr lög af eldfjallagjósku til að ákvarða aldur mannvistarlaga. M.ö.o., þá gefa Skútustaðaminjar möguleika á að rekja þróun og sögu yfir langt tímabil. Rannsóknir á náttúru og umhverfi Mývatns síðustu áratuga skapar einnig betri skilyrði til nýrra fornleifarannsókna auk þess sem nýlegar

fornleifarannsóknir hér og hvar í S-Þingeyjarsýslu dýpka skilning á afrakstri Skútustaðauppgraftar.

Þegar þessi orð eru rituð standa enn yfir athuganir á gripum, beinum og jarðvegssýnum á rannsóknarstofum Fornleifastofnunar og Hunter College í New York. Liggur nú fyrir álitlegt safn dýrabeina og gripa sem eflaust mun varpa ljósi á sögu og menningu Mývatnssveitar í gegnum aldanna rás.

Sumarið 2013 fékk Skútustaðaleiðangur heimsókn frá fróðleiksfúsum nemendum Fornleifaskóla barnanna á Litlulaugum í Reykjadal. Auk þess hélt Hið Þingeyska fornleifafélag opinn dag um yfirstandandi fornleifarannsóknir í héraðinu í Litlulaugaskóla, þar sem til sýnis voru m.a. gripir og bein úr Skútustaðarannsókn.

Stjórnandi rannsóknarinnar er Megan T. Hicks og var Adolf Friðriksson meðstjórnandi. Auk þeirra unnu Andrea Torvinen, Brenda Prehal, Katie Grundtisch, Scott Schwartz, Ágústa Edwald, Gísli Pálsson, Sant Mukh Khalsa, Frank Feeley, Elisheva Charm, og Cameron Turley við rannsóknina til lengri eða skemmri tíma. Mjöll Snæsdóttir og Guðrún Alda Gísladóttir hafa annast athuganir á forngripum. Ásmundur Jónsson frá Hofstöðum, Unnsteinn Ingason og Sif Jóhannesdóttir hafa veitt margháttða aðstoð á hverju ári. Árni Einarsson líffræðingur varð fyrstur til að taka eftir öskuhaugsminjum í rofi, sem leiddi til þessara rannsókna. Hann hefur veitt ómælda aðstoð við verkið frá upphafi. Er öllu þessu fólki hér með þakkað fyrir aðstoðina.

Rannsóknin naut veglegra styrkja frá Visindasjóði Bandaríkjanna og NABO í New York, United States NSF Grant *Centennial Scale Human Ecodynamics in Skútustaðir, Mývatn Northern Iceland* (undir stjórn Thomas H. McGovern og Megan Hicks), Minjastofnun Íslands veitti rannsóknarleyfi.

Gerður Benediktsdóttir og Þorlákur Jónsson hafa góðfúslega gefið leyfi til rannsókna á Skútustöðum og er þeim þökkun liðveisla, hvatning og góðar móttökur.

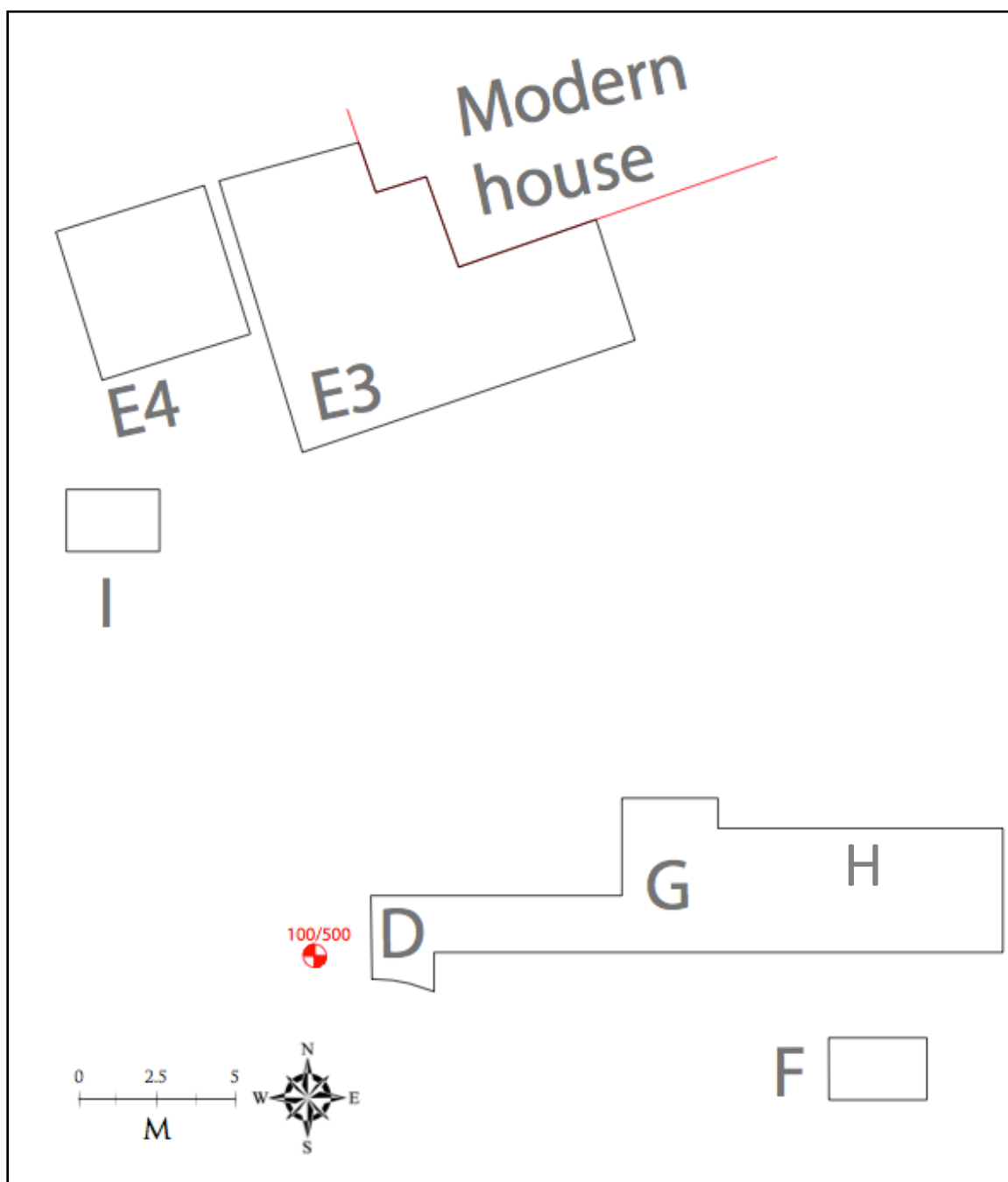


Figure 2 Map of excavation areas 2008 through 2014. Contributions to this Autocad database here housed at FSI are by Ágústa Edwald, Lilja Pálsdóttir, Megan Hicks and Gísli Pálsson.

Excavation Narrative 2013

Megan T. Hicks

In 2010, an excavation area E3 was opened adjacent to the modern home of Gerður Benediktsdóttir and this area near the highest point of the home field contained well-stratified midden layers below the Veiðivötn AD 1477 volcanic tephra (Hicks et al.

2011) In 2013 area E4 was opened exactly 50 cm west of Area E3 to add to our sample size of faunal remains and artifacts for study from the Middle Ages and in doing so we confirmed the presence of part of a substantial structure, which was left unexcavated. Excavation was carried out according to the FSI excavation guidelines including single context recording and 100% sieving through 4mm mesh.

To summarize the findings in area E4, deposits descending from the topsoil to the V1477 tephra are categorized as infield soils (Adderly et al. 2008) with sparse midden remains including bone, ash and early modern/modern artifacts. Below the V1477 and V1410 tephra, the density of midden remains increased and deposits were identified as intentional dumps of midden mixed with turf. The structural remains identified consist of row of stones oriented in a general N/S direction uncovered in the western side of the trench. Below the H1104/1158 tephra, the volume of deposits layed in a natural, linear depression in the lava bedrock and are composed of midden, turf dumps, and collapsed or discarded stone, perhaps structural. It seems that after the middle ages the structure fell out of use, the area was refuse disposal and in early modern times – an enriched hay infield. Without indulging too much in literal interpretations of the sagas, this early structure straddling a ravine in the bedrock is evocative of the descriptions of the Viking age dwelling of “Killer Skúta” in the Saga of the People of Reykjadalur, that describes his domestic space overlying “a subterranean passage”(Reykðæla saga, ÍF X, chap. 28).

Area I, a small trench, was also opened just south of the crest of the hill – the aim was to test deposits here as they have only been documented through coring. The very dense midden deposits of modern and early modern remains in area I were pitted by subsequent modern postholes and cuts of an unknown purpose. The anthropogenic content of deposits generally decreased in density as the excavation progressed toward the older layers some mirrored trench E3 in composition. Area I has excellent potential should future project goals call for more data gathering pertaining to the early modern phase of the site.

Table 1 Points at Skútustaðir Coordinates en the Icelandic national grid ISN93 (Lambert/WGS84) recorded by Garðar Guðmundsson

Point Name	Easting	Northing	Height
OS55861 Base 2.2 km south of Grænavatn	591708,075	559681,687	351,494
Back Sight (nail, w/metal tag, in a rock ca. 7 m SSE of silo)	590817,034	564432,031	355,425
Area I			
Southeast Corner	590818,218	564448,202	357,641
Southwest Corner	590815,315	564448,582	357,792
Northwest Corner	590815,611	564450,506	357,734
Northeast Corner	590818,432	564450,17	357,647
Area E4			
Southeast Corner	590823,252	564454,706	357,002
Southwest Corner	590818,237	564454,203	357,791
Northwest Corner	590817,867	564459,171	357,556
Northeast Corner	590822,819	564459,628	356,882

Area E4

Directly under the removed turf and root layers, context [400] was a uniform matrix of silty infield topsoils and light traces of blown or dumped ash. Artifacts were common and diverse, including several glass bottle fragments <7>³ and flat glass fragments, a manufactured glass button <49>, pottery including white earthenware's <41>, wood fragments, iron nails including horseshoe nails <18>, a Cu alloy bullet casing (22 caliber short) <4>, coal <15> and an obsidian fragment. A small quantity of bone was found in this layer, not filling one sample bag.

Deposit [400] sealed a thin, dark grey tephra hypothesized to be the V1717⁴ [401]. The surface of the deposit was interrupted by shallow crazing in a polygonal pattern likely imposed by past cycles of freezing and thawing of soils. This pattern was seen in deposits at the same level in 2010 in adjacent area E3 (Hicks et al. 2011).

Deposit [402] consisted of sandy silt with occasional lenses of gravel as well as charcoal and ash. Fragments of Cu alloy objects, glass, a kaolin pipe stem <56>, unidentified iron objects and pottery were recovered as well a small quantity of bone – one bag. Kaolin clay tobacco pipes are known to arrive in Iceland through import in the early 17th century, and they fall out of use perhaps in the late 19th century, therefore their presence in this deposit agrees with the preliminary chronological interpretation.

Deposit [403] was red brown silt with gravel, traces of charcoal and midden. Within it was an unknown, thin dark grey tephra, which was not evenly present and was removed with the deposit. This could be the same tephra found in the 2011 excavation (Hicks 2013, p 22) which has been identified elsewhere on site. Artifacts found included glass, earthenware pottery fragments, kaolin pipe stem fragment <36>, obsidian, earthenwares <110>, iron fragments, and Cu alloy objects.

The deposits noted thus far have had broad horizontal extents and seem to be infield soils where hay may have been cultivated. This hints at continuity throughout the early modern period through modern times, as hay is reaped from this infield in the present. Context [403] sealed [406], the V1477 tephra.

[406] is hypothesized to be the V1477 tephra which has been very identifiable in this location in this year and past years. The deposit was approximately 2 cm thick and a notable green tint. An iron nail and copper alloy object were found within. Deposits better- described as midden dumps and turf dumps, and were more common below the V1477 tephra, signaling a change in activity in this area across this horizon.

³ Contexts are labeled with brackets [x] while diagnostic and rare artifacts are labeled <x> throughout. Context, artifact and sample registers are appended. Prefixes H and V denote Hekla or Veidivötn volcanic tephtras.

⁴ All tephra identifications are preliminary.

A silty midden deposit [411] separated the above from the probable V1410 tephra [418]. This midden context yielded one bag of bone, as well as a Cu alloy object, manuport stone, earthenware, worked bone, and an unidentified iron object.

In other excavation areas on this farm mound, the grey V1410 tephra [418] has similarly been found just a few centimeters below the V1477 tephra with moderately anthropogenic or fairly empty deposits in between the two chronologically close tephtras. These deposits are of interest as they can potentially provide evidence of Iceland's experience of the black plague eposides in 1402-3 and the late 15th c.

Below the V1477 tephra and subsequent context [411], a linear arrangement of stones was partially exposed, oriented in



Figure 3 Finding the contours of the uneven ground surface below the 1477 tephra.

a north/south direction, on the western and uphill side of the excavation unit. These formed part of an unknown ruin, of which the outline and central depression are barely visible contours in the modern day homefield grasses. Below the V1410 tephra, more collapsed structural stone was uncovered and left *in situ*. Midden remains increased in density; ash, bone and artifacts were more common and a series of deposits of mixed turf and midden dumps were interdigitated with gravel deposits associated with wall collapse [434]. After the loose gravel was removed, a 1 meter protective baulk (unexcavated area) was delineated along the entire western side of the trench to protect the structural remains and preserve them for future excavations.

As stated above, the V1410 tephra sealed two areas of deposits. One set were sandy silts with gravel, possibly relating to wall collapse [434], [427], [438], the other, further east, were midden and turf dump deposits. Gravel deposit [434] is thought to correspond with a time of disuse of the structure while the midden contexts above below point to the area's use for refuse disposal in the late Middle Ages. Midden deposit [424] contained ample large bone fragments. Dumped blocks of turf composed the bulk volume of the context and within the cut and disposed turf blocks was a stratigraphy of what appeared to be the H1300 tephra (warm grey and coarse grained), the white H1104/1158 tephra and the multicolored 940/871- dating the turfs to post 1300. One iron object was recovered from [424]. Deposit [427] was gravel and sandy silt, removed to view wall stones down to a planned surface that was left intact [438].



Figure 4 the surface of deposit [424] a turf dump with midden material in E4, photo is facing S/W the linear stone feature is just becoming visible in the south western edge of the trench.

Context [429] was a fairly uniform silty midden deposit with charcoal fragments and the grey tint of wood ash. A very well-preserved two dice were found in this context very close to each other - <117> and <118> - as well as an iron fish hook and an unidentified Cu alloy object.

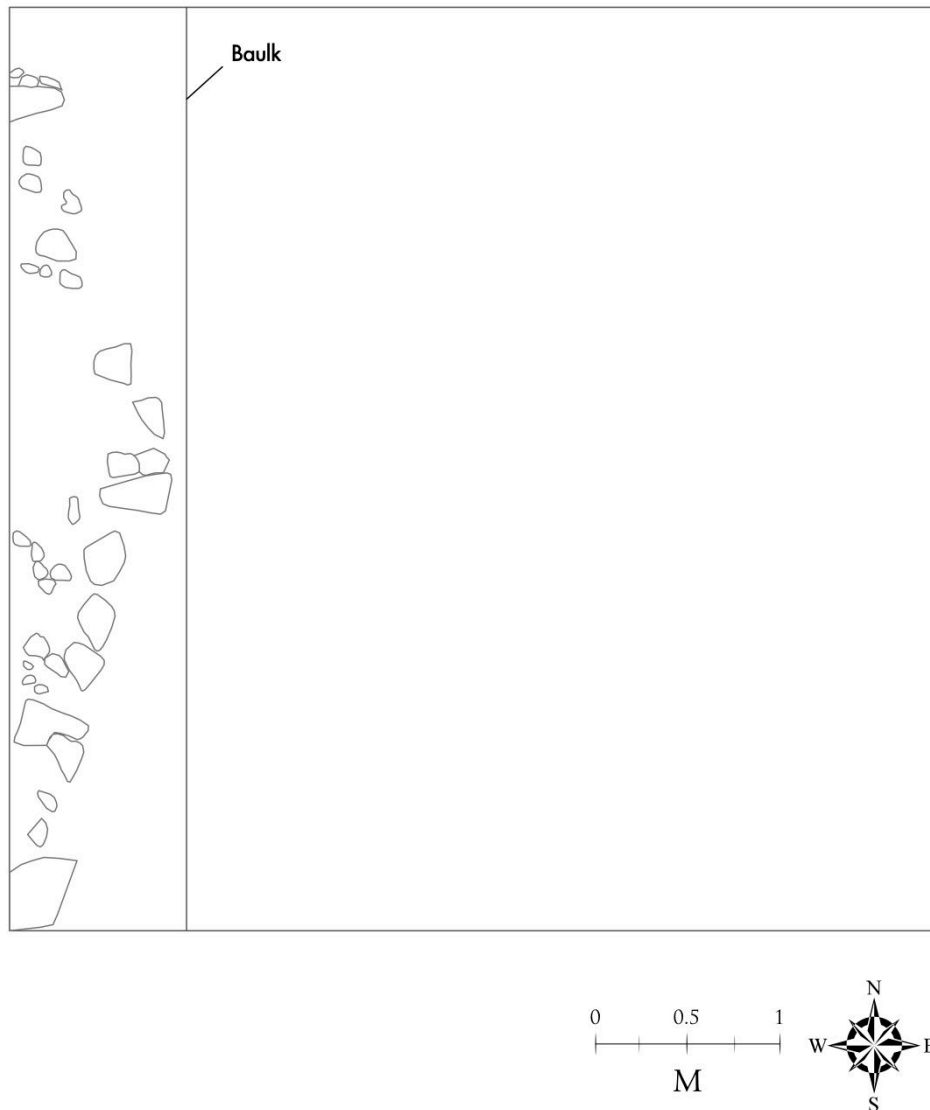


Figure 5 Partially exposed building stones. A 1 meter protective area around them was left unexcavated. Camera faces site North.

An unnatural linear discoloration was becoming ever more clear in the trench. This ultimately was found to be an extremely narrow, very modern cut [465], 2-3 centimeters wide, made by a line plough (in Icelandic, *línuplógur* or *kaplaplógur*) that sinks a heavy, but narrow blade in the earth leaving a buried line – in this case, a wire for a telephone in the late 20th c. This cut was emptied and noted as affecting all contexts above deposit [455]. However, it did not have a great effect on the deposits as far as disturbance because it was extremely narrow. The cut was emptied of a very small volume (fill [464]) (<1 bucket) of mixed material that was sieved and found to contain neither bones nor artifacts.

Figure 2 Area E4 structural remains partially exposed. The structure is of unknown type and function and is broadly phased as predating the fall of the V1410 tephra. 1 meter of unexcavated area was drawn to protect the remains future excavation. North indicates approximate “site north” convention. Autocad image Gísli Pálsson.

E4 ‘Wall’ feature



Turf and midden dump [442], was dark brown sandy silt with visible turf blocks and midden material. Initially it was thought to be sealed by a tephra [441] but the observation was due to sandy material possibly redeposited tephra within the turves. Within this deposit, a bone button <151>, an iron clench bolt, an iron nail, worked stone, and a pot fragment, iron object, and a river stone manuport were found as well as a volume of one sample bag of animal bone.

Contexts discussed above including those below [406] down to [442] span the years 1477 back to 1104/1158 based on preliminary tephra identification. It was hoped that a significant sample of bone would be recovered from this phase. Ten sample bags in total were in fact collected, which should add to current data on animal economies from the middle ages in Iceland, specifically by augmenting the samples of bone from the same phase in other trenches from Skútustaðir.

Below [442] on the southern side of the trench, deposits [445] were composed of significantly more gravel. The nature of the bedrock on this site is that it undulates with both steep and irregular changes in topography. This gravel was atop high region among uneven bedrock. The deposits immediately above the bedrock in other excavation units at this site have been a similar mix of soil and the extremely friable gravel the latter originating as part of the natural lava surface below. We decided to clean the high bedrock surface, with the mixed [445] thoroughly before addressing the deposits in the steep depression. [455] is thus phased as 1410-*landnam* and was likely formed when the first inhabitants of the farm discarded refuse and walked on a near-barren lava gravel surface with little or no soil. An iron object and fire-cracked rock were recovered from this context and a small amount of bone.

Although the removal of [455] meant going slightly out of phase, doing so allowed us to maintain a clearer picture of verifiably natural surfaces, with secure relationships, out of the fissure before proceeding to the deep deposits within in the bedrock fissure. Clearing [455] to the natural surface also allowed the crew move and out of the excavation area without disturbing or contaminating the friable deposit.

Below [445], bedrock with light brown natural soil patches with very intact V940 and/or V871 tephra [456].

Context [448] is a light brown turf dump with occasional bone, an unknown iron object and a bone comb fragment <167>. It is the first context confined to this crevice in the bedrock. A few points are worth noting here that midden remains are put to use for a practical purpose people can place midden in the landscape to amend and improve soils, hide or obscure refuse, accumulate or diffuse refuse, or in this case apply it to change topography. These midden remains in the small ravines at Skútustaðir seem to have been rapidly accumulated (McGovern and Edwald 2009, Hicks et al. 2012), filling ravines early in the course of settlement – suggesting purposeful topographic alterations were made by the first settlers of this farm.

Directly below [448] was a white tephra, which is very likely the Hekla 1104/1158. Identification of this tephra is quite reliable when taking in to account its position below a bone/antler comb fragment and that it is above the *landnam* sequence. Areas of this in situ tephra were more visible than others, but traces of it were encountered clearly in the west end of the area with faint traces to the east.

Below this tephra, deposit [452] was a midden and turf dump composed of brown silty soil with midden, charcoal and turf. Below, context [453] was silty soil, possibly degraded turf, densely laminated with very greenish grey tephra. Initially it was thought to be tephra in situ, but was later found not to extend beyond the turfy matrix. Beyond

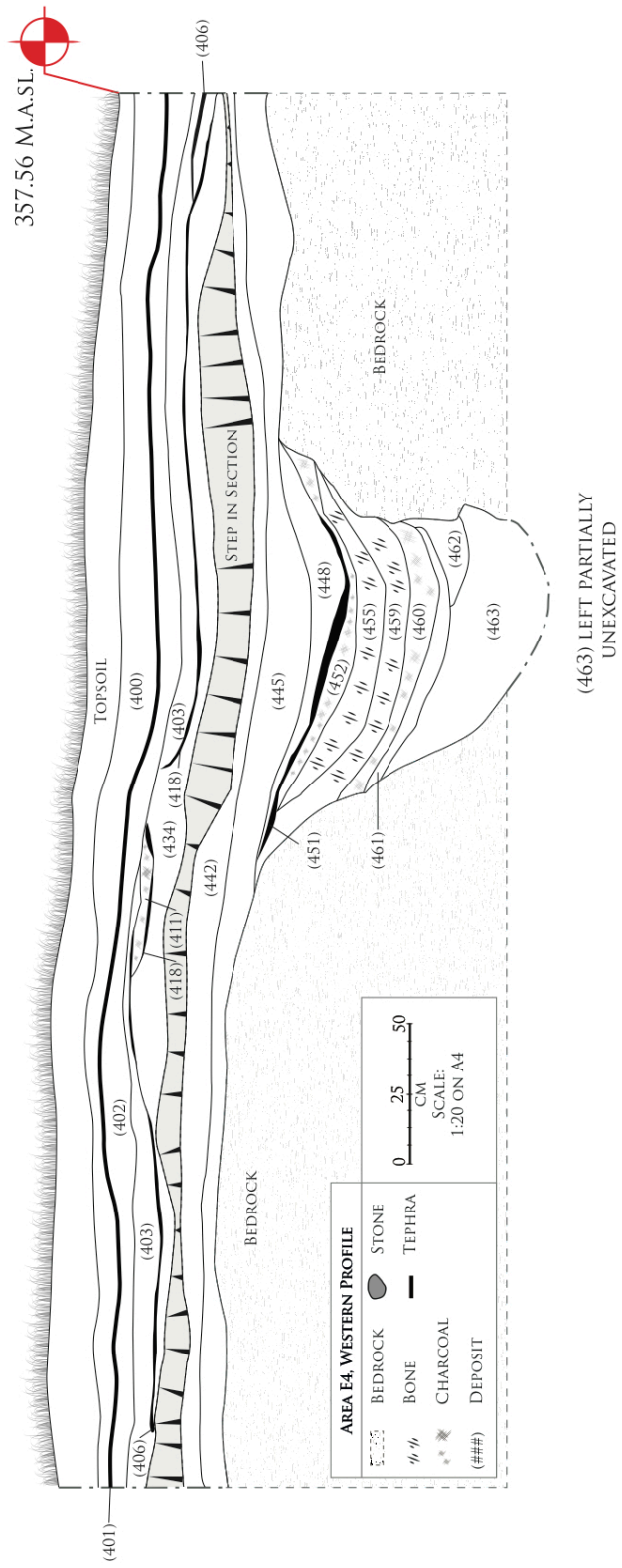
being isolated to the bedrock crevice, there were no significant indications that this turf was part of intact structural remains; it was below and above midden layers.



Figure 6 Photograph shows the uneven bedrock surface and deposits remaining within the depressed area. Camera direction is west. Also visible is the telephone line set in to the ground by a line plough machine in the mid 20th c.

In the northern end of the trench, the bedrock rose to the same level as in the southern end, meaning we were finding the deposits within a trough oriented roughly site east/west. The bedrock was similarly a highly friable surface as [455] and this context [454]. We cleaned this surface down to sterile bedrock. Traces of the H1104/1158 tephra were above this thus it is phased as *landnam* through H1104/1158.

Figure 7 Profile of the western side of excavation area E4. Shaded region indicates a horizontal surface that is a 1 meter step in the section edge. Though the excavation conventions use brackets for deposits and parentheses for cut features, we preserve international conventions in the profile drawing whereby the symbolism is reversed. Autocad tracing by Gísli Pálsson.



Deposits in sequence [455], [458], [459], [460], [461], [462], were all within the bedrock ravine and are alternating layers of midden and turf dumps. Some inclusions were medium sized stone approximately 10-20 cm. Turf, stone and gravel dumps with occasional midden, could be evidence of efforts to fill this uneven surface possibly around a structure in use. The agglomerations of turf and stone did not look distinctly structural though detailed spatial plans were made. Fire cracked rock and iron fragments were found in deposit [455] while deposit [461] included an iron rove <182> and an unidentified iron object.

Below the turf dumps, deposit [463] was notably waterlogged and finely banded. The banding alternated between a mid-light brown clayish silt soil and green-grey sandy silt - likely to be re-deposited tephra. The marked water logging of this context and its location at the bottom of a deep lava crevice, adjacent to the structural remains considered with its lenses of clayish texture and traces of coprolytes suggests that it could be a byre drain or a latrine. However the volume of the deposit seemed to be turf. The sandy lenses were thick and grayish green, possibly tephra, and as the layer pre-dates the 1104/1158 ash fall, the tephra lenses are hypothesized to be V871 and/or V940-within turf. The context was very deep. In fact, it was not completely excavated but was extensively sampled (10 x 10 L buckets and 3 x large plastic sample bags). Only a small quantity of bone was recovered from [463] - though the damp conditions of the deposit could be ideal for entymological sample recovery.



Figure 8 Photograph of the section view of deposits within the bedrock fissure in E4, facing west.

Our in-the-field description of [463] was preliminarily expanded by Árni Einarsson (next section) at the Mývatn Science Station where the samples are currently stored at cold

temperatures and tightly sealed. The deposits below [463] in the bedrock depression were quite deep and due to time constraints, were not completely excavated down to the natural surface below. However, as they may relate to the use of the building to the west, their being left intact allows the future study this relationship both in the standing profile and through continued excavation of the structure to the west.

The excavation area was closed after protective, water-permeable fabric was placed in the trench atop the intact wall remains and the remainder of deposit [463] in the bedrock ravine. It was backfilled entirely with soil from the sieve spoil heap and high quality turves were placed down and watered.

The major findings from this excavation area E4 convey a fluctuating use of space over 1000 years of settlement of Skútustadir. The deposits above the V1477 tephra strongly suggest the area being used as an enriched infield with occasional discarded household refuse from AD 1477 through the present. Below and before the fall of the 1477 tephra, the nearby structure fell out of use and midden dumped on the adjacent ground surface. The midden deposits below/before the V1410 tephra could date to a time when the building was in use, while turf dumps, stone, gravel and midden in the lava ravine below the H1104/1158 tephra may have had the purpose of leveling the highly uneven ground surface potentially near the contemporary structure. Context [463] (the possible byre drain) should be analyzed further as it may lend additional insight in to the use of the building. Overall, artifact recovery and preliminary artifact chronologies support the hypothesized tephra identifications. Recovery of animal bone samples for analysis will fill in data sets between AD 1000- 1500, while the early structure at Skútustaðir presents excellent target for future work.



Figure 9 Final view of deposits in trench: the unexcavated wall remains to the west, uneven bedrock surface in the majority of the trench and some remaining deposits in the bedrock depression.

Figure 10 Area E4 Harris Matrix

		Topsoli	cut 465
		400	fill 464
		[401] - V 1717 Tephra	
		402	
		403	
		[406] - V1477 Tephra	
		411	
		[418] - V1410 Tephra	
		425	
		424	
		434	
427		429	
438		437	
		442 = 441	
		445	
		448	
		[451] 1104/1158 Tephra	
			454
		452	Bedrock
446			
Bedrock		453	
		455	
		458	
		459	
		460	
		461	
		463	
end of excavation, bedrock not reached in this location			

Area E4 West profile (East facing)

Hypothesized Tephra identification	Context number	Sample number
Possible 1717	[401]	sample <58>
Unknown tephra	within [403]	sample <57>
Possible 1477	[406]	sample <56>
Possible 1410	[418]	sample <64>
Possible 1104/1158	[451]	sample <55>

Area E4 East Profile (West facing)

Hypothesized Tephra identification	Context number	Sample number
Possible 1717	[401]	sample <63>
Unknown tephra	within [403]	sample <62>
Possible 1477	[406]	sample <61>
Possible 1410	[418]	sample <65>
Possible 1104/1158	[451]	sample <60>

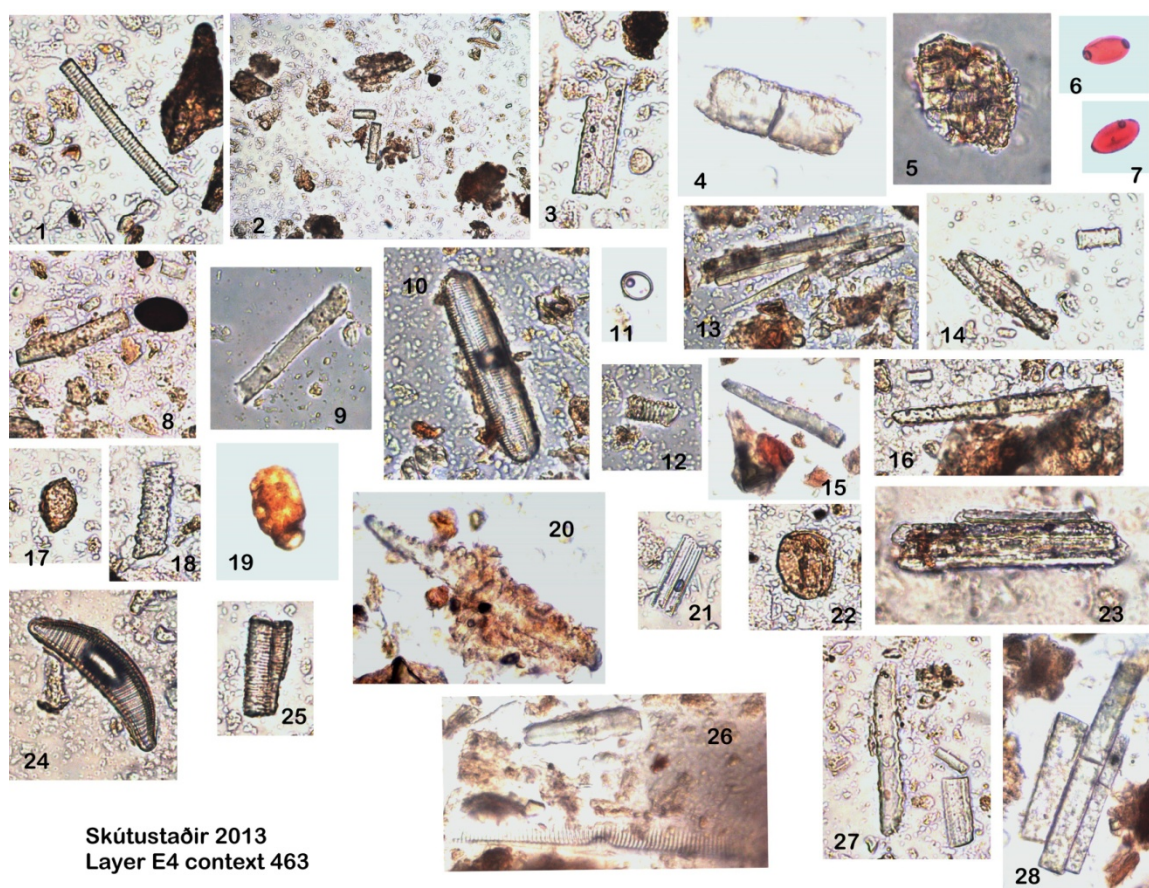


Figure 11 Microscopic photographs of material within [463] by Árni Einarsson

The sample was a knife-point sample from a light band from SKU 13, area E4, context [463], on 29 July 2013. Under the microscope at 400x magnification it appeared as a predominantly very fine-grained whitish mineralogenetic material with coarse tephra grains in between. Diatom fragments (*Epithemia*, *Rhoicosphenia*, *Synedra*, *Gomphonema*, "Fragilaria"), coprophilous fungal spores (possible *Podospora* type), phytoliths and pollen were common. Plant fibers and other organic material seemed almost absent.

Interpretation: The diatoms observed are species commonly found growing on vegetation in open fresh water, e.g. along pond edges, but less likely in bog surfaces. One might expect to see those diatoms in hay from such places or in manure from animals grazing along pond edges or fed hay from there. Lake Mývatn is not a likely place of origin: although the diatom species are all found in Lake Mývatn one would expect a completely different species composition (with *Fragilariaceae* dominating) if the material was from there. A preliminary judgment is that the material contains residue of hay from a wet meadow or manure from livestock fed such hay, or both. Future analyses of insect remains and phytoliths might be used for testing this hypothesis.

Table 3 List of microscopic contents identified in figure 11 by Árni Einarsson

1 phytolith?	16 phytolith?
2 phytolith?	17 unknown
3 phytolith?	18 phytolith?
4 phytolith?	19 unknown (coprophilous fungal spore?)
5 unknown	20 phytolith?
6 coprophilous fungal spore	21 Diatom: Fragilariaceae
7 coprophilous fungal spore	22 Pollen?
8 phytolith?	23 phytolith?
9 phytolith?	24 Diatom: Epithemia turgida
10 Diatom: Pinnularia sp.	25 phytolith?
11 unknown	26 phytolith?; diatom: Pinnularia sp.
12 phytolith?	27 phytolith?
13 phytolith?	28 phytolith?
14 phytolith?	
15 phytolith?	

Excavation Narrative: Area I

Cameron Turley, Ágústa Edwald, and Sant Mukh Khalsa

Excavation of Area I, a small, exploratory 2 by 3 meter trench southwest of Area E4, began on July 10, 2013. The primary goal for the area was exploration of the hilltop at the site, which has gone unexplored in previous seasons. A naturally eroding area on the southern side of the hill exposes present early modern artifacts while adjacent excavation area E4 has revealed pre AD 1410 structural remains. These nearby deposits hint at this area being archaeology rich. A test trench in this area might be revealing of numerous past activities, midden formation and outdoor activity areas near the hilltop structure identified by the concurrent excavation of E4 in 2013.

Area I ultimately contained cultural deposits covering time periods from recent modern to circa C.E. 940. The most common use of this small hilltop section was as a dumping area for midden materials. The Veidivötn 1717 tephra fall provides a *terminus post quem* for six discrete phases of trash deposition—this count considers material from the topsoil as a separate event. Modern and early modern materials are ubiquitous in late contexts, consisting of a fairly standard mix of trash materials. White glazed and painted earthenwares, extruded wire nails, bottle glass technology from hand-blown to mold-made, are all represented to varying degrees in the upper strata. Faunal remains were ubiquitous, as expected with the middens at Skútustadir, though contexts [405, 408, 409] were particularly rich. Most of the late midden dumps were deposited on a relatively level or slightly sloping surface, but fill [412] was placed into a cut [413] that extended below the 1477 tephra in the southeast corner of Area I. Whether or not the cut was initially intended to serve as dump is unknown. Several modern posts and a posthole

within the fill are suggestive of a boundary corner, but definite identification to such a function is not possible in such as small test area.



Figure 12 A tephra surface in Area I seen with cuts and fills. Camera faces south.

Dumping activities in the vicinity of Area I potentially halted for a brief time following the deposition of the V1717 tephra. Evidence for the brief cessation comes from a careful delineation of context [416] - a possible natural accumulation of silt.

Table 4 Area I Hypothesized Tephra

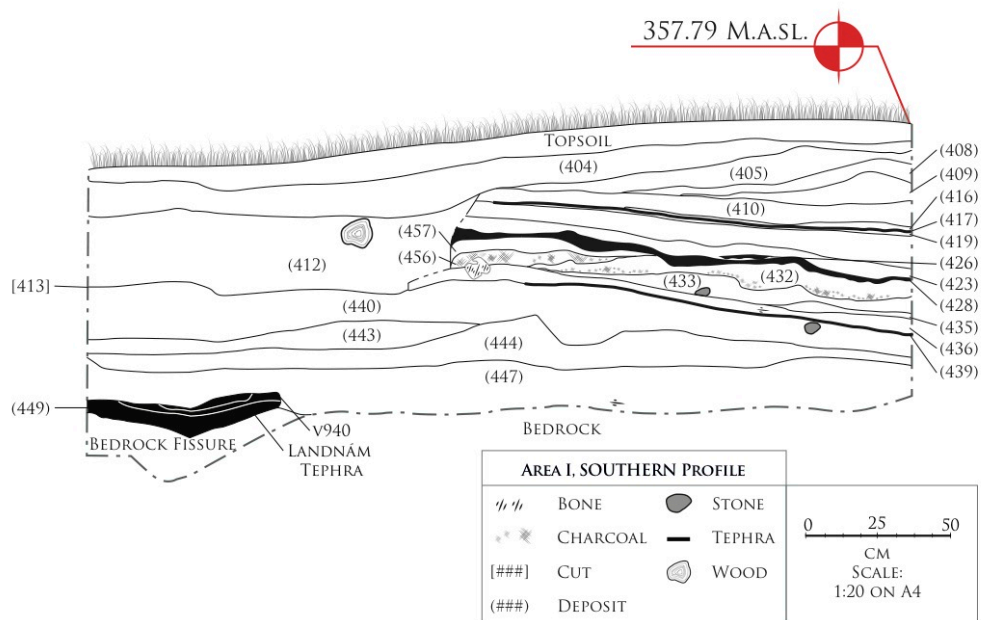
Hypothesized tephra identification	Context Number	Sample Number
Possible V1717 tephra	[417]	<51>
Unknown tephra	[426]	<50>
Possible 1477	[428]	<49>
Possible 1300	[449]	<47>
Possible 871	[449]	<46>

Four earlier midden deposits and turf dumps [419, 420, 421, 423] were found well sealed between the 1717 and 1477 tephra falls, where they were not truncated by later cutting activities related to [413]. While “midden” still accurately describes these contexts, they are far less rich in bone than either the later deposits described above or the earlier deposits outlined below. Artifacts assigned to the AD 1477 to 1717 phase in Area

I are few, including only a few small shards of heavily opalized glass, an unknown iron object, and a whetstone fragment.

The lack dense midden material might simply speak to a different use of space for that span of time. The presence of well defined, if relatively thin, deposit of wood ash [422] could indicate a general shift in the use of this narrow space. When identified elsewhere in Area I, wood ash is mixed with a variety of refuse more characteristic of middens. Additionally, a possible 1630 tephra [426] was tentatively identified just above the 1477 tephra. The argument of disuse for this small area will receive additional backing if the sample collected is confirmed as 1630.

The hypothesized H1300 tephra marks the *terminus post quem* for another series of midden deposits [432=456=457, 433, 435, 436]. These deposits exhibited a relatively high density of faunal material, particularly [432], but diverge in character from later and earlier Area I midden contexts in that they contain much more evidence of burned material. These strata show the highest proportions of charcoal, peat ash, and wood ash encountered in the trench. Other artifacts were infrequently deposited in this area at this time. One copper object, one iron fish hook, a river stone, and an iron key were the only artifacts recovered.



An earlier phase of events in Area I is secured between the hypothesized H1300 and V940 tephras. Once again, this phase is primarily characterized by successive midden deposition and turf dumping activities. Bone density remains relatively high. The major departure when compared to later phases is the matrix of each deposit. Units [440] and [444] are extremely dense with gravel inclusions that range from pea-sized to one to two

cm, far more than later midden deposits. They are also much thicker than most of the other deposits, particularly those phased between V1717 and H1300. The [443] turf dump is markedly more homogenous than later deposits characterized similarly.

Context [447] is somewhat perplexing. It is an extremely dense, compact, and level gravel fill. When initially exposed, the stratum was suggestive of a natural deposition, but exploratory soundings revealed bone at the bottom of the context. It is worth noting that all of the bone recovered from [447] was at the bottom of the layer, at the interface with the bedrock and the two earliest deposits, [449] and [450]. The compaction and level bedding angle are suggestive of an occupation surface. While this might not represent an occupation surface or floor, it does have the appearance of deliberate preparation. Alternatively, the leveling and compaction might be the result of frequent foot traffic by either people or livestock.

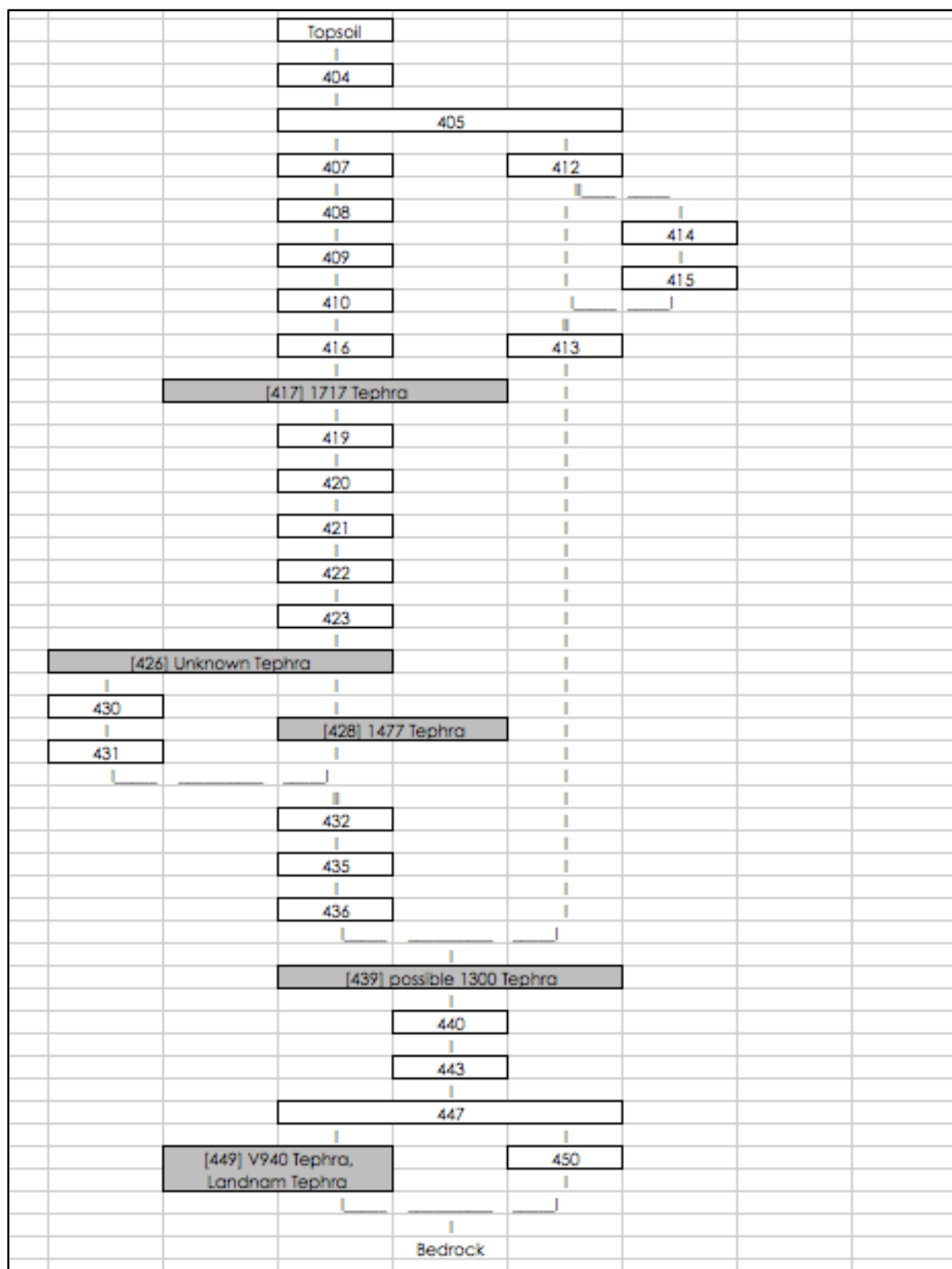
The earliest anthropogenic layer, [450], was defined in a bedrock depression below [447]. The 940 tephra was contained within the small, bone dense context, though it did not appear to be *in situ* as the matrix above and below the small patch was consistent in terms of both composition and inclusions.

Context [449] is a natural deposition isolated to the southeast corner of the excavation unit. Its composition is very well sorted silt with two *in situ* tephra falls, most likely 871 and 940. Both were sampled to confirm their origins. This natural deposit covered degraded purple and red bedrock materials. The combination of natural silt containing very early *in situ* tephras and bedrock signaled the complete removal of anthropogenic material from Area I.

Excavation in Area I opened with expectations of discovering midden material, expectations which proved well founded. Evidence of alternative uses for this space, including fence post cuts, added more detail to the history of uses of this hill top location. The excavation area I was intentionally placed approximately 3 meters to the south of the hypothesized structure, contributing to the possibility of finding traces of diverse and complex activities nearby. In the end, midden remains were predominant while context [447] was the only deposit suggestive of a possibly leveled surface.

The following section briefly describes each context from the youngest to oldest deposits.

Figure 13 Area I Harris Matrix



Context Descriptions

Unit [Topsoil]

Unit [404] This late anthropogenic deposit covered the entirety of the trench and was registered as unit number [404]. The sediment matrix was a firm, dark gray silt heavily clasted with gravel inclusions, which accounted for up to 40 percent to the stratum's total volume. Excavators also noted mottling, apparently the result of turf dump or collapse. Artifactual material recovered is generally recent, though some materials, like a hand-blown glass bottle <006>, could be older. A variety of ceramics are also counted among the diagnostic artifacts. Overall, the deposit is characteristic garbage dumping activities.

Unit [405] was underlain by a roughly similar turf dump or collapse, which was registered as [405]. Again, the context covered the entirety of Area I. The matrix was moderately compact silt with pockets of coarse sand, mottled red, brown, and yellow. Occasional patches of charcoal were noted throughout the context. Thickness of the deposit was variable, ranging from 10 to 15 cm. Artifacts present are relatively recent, ranging from an abundance of extruded wire nails to mold-made glass bottles and white earthenware. Wood posts were found in the southeast corner of the trench, perhaps marking the edge of an old fence line.

Unit [407] was a small, lensed deposit of coarse red and black sand in the eastern half of Area I, apparently dumped onto [408]. It did not extend to any edge of the trench. Two small shards of brown bottle glass were the only anthropogenic materials recovered from the context.

Unit [408] Context [408] was a mixed turf debris and general trash dump in the western portion of the trench. The matrix was mottled brown, reddish brown, and yellow silt, interspersed with occasional sandy lenses, charcoal flecks, peat-ash, and blocks of turf. Thickness was greatest in the west end of the trench, the deposit lensing out to the east. A portion of [408] was truncated by cut [413] in the southeast corner. Bone, eggshell, ceramic, glass, wire, and wire nails were again common in this deposit.

Unit [409] - was interpreted as a midden deposit restricted to the west side of Area I, where it underlies [408]. Similar to the previous deposit, this context lensed out to the east. The matrix was a friable black and gray silt interspersed with wood ash, peat ash, and charcoal. Bone was common throughout and consisted of an increased proportion of fishbone. Artifacts represented in the context were still relatively modern, including square extruded nails, ceramics, and what might be fragments of degraded rubber material. Six grams of wood were sampled and registered as sample #31.

Unit [410] This context was described as a deposit of mixed turf debris that covered most of Area I, with the exception of where it was cut by [413] in the southeast corner.

Exposure of [410] allowed for the definition of the full horizontal extent of cut [413]. The matrix was primarily friable mid-brown silt that darkened toward the eastern extent of the trench, possibly the result of charcoal staining. Artifacts recovered remain fairly recent, as evidenced by an extruded wire nail and white earthenware. Interestingly, a small knapped piece of obsidian was also present. Bone density dropped dramatically relative to the overlying contexts, consisting of very few fragmentary mammal bones.

Unit [412] This context was a mix of turf debris and lenses of midden material that filled cut [413]. The matrix was primarily silt with increasing sand content with depth. Colors were heavily mottled browns, reds, and yellows. Inclusions consist of peat and wood ash as well as occasional charcoal flecks. The 1477 tephra was also noted in some of the turf debris. Artifacts included square extruded nails, glass, white earthenwares, and a piece of worked bone <023>. Mammal bone was also recovered from [412], covering the range from relatively intact to fragmentary, with a number of heavily burned pieces. The fill post-dates context [410] (as seen in the profile) and possibly context [408] (as noted in the context sheet for that deposit).

Unit [413] This was a modern cut feature in the southeast corner of Area I. Its original function or intent was unknown, but it was ultimately filled with [412]. It is highly probable the cut was made after the deposition of [408], but it certainly post-dates [410]. Rough dimensions for the cut are 140cm east-west and 60cm north-south. Depth was approximately 35cm. In addition to [408] and [410], the feature cuts [417] (1717 tephra), [419], [423], [428] (1477 tephra), [432=456=457], and [436].

Unit [414]/[415] - This feature was a shallow cut for a fence post filled with loose brown silt and half rotting wood. Cut was approximately 11cm deep and elliptical in plan view, steep to gentle sloping side and a flat base in profile. Cut into fill [412].

Unit [416] - Interpreted as a potentially natural deposit that covers the 1717 tephra [417]. The matrix was very friable silt mottled orangey brown with patches of yellow turf and possible small lenses of black tephra. The tephra was discontinuous, but did appear to be *in situ*. The eastern extent of the layer was largely unclear, but one small section of its eastern edge was truncated by cut [413] — the truncation was not visible in the profile. The deposit ultimately proved sterile.

Unit [417] - This deposit was the probable 1717 tephra. Covered by [410] and [416], underlain by [419], and truncated in the southeast corner by cut [413]. Aside from the truncated portion, the tephra covered the entirety of Area I. The tephra was sampled (#51) to confirm its identity and ensure proper phasing. Five small bone fragments were excavated with the tephra.

Unit [419] - Mixed turf debris and midden deposit truncated in the southeast corner by cut [413], but otherwise ubiquitous in Area I. The matrix was soft, grayish brown silt flecked with charcoal and occasional patches of the 1477 tephra. Artifacts from this context include two heavily opalized shards of glass and an unidentified metal object. A small amount of highly fragmented mammal bone was recovered from the deposit. The unit could not be distinguished from [420], [421], and [423] during profile drawing.

Unit [420] - The context was interpreted as a brownish gray midden deposit. The matrix was friable silt, with frequent inclusions of wood ash and charcoal making up as much as 25 percent of the volume. One chunk of possible slag, one heavily opalized shard of glass, and a small bag of fragmented bone were the only anthropogenic materials recovered from the deposit. The north edge of cut [413] truncated a portion of the context. Much of the boundary in the southwest quadrant was uncertain during the initial excavation and could not be identified in the profile. Unit [420] was indistinguishable from [419] and [421] during profile drawing.

Unit [421] was a soft, orangey-brown silt matrix that was only identified in the western area of the trench. Its horizontal boundaries ranged from clear to uncertain. No artifacts or bones were recovered from the context. Occasional, small chunks of charcoal are the only potentially cultural inclusions noted in the deposit. The context could not be distinguished from [420] during profile drawing.

Unit [422] - This deposit was a thin layer of grayish-blue wood ash that was restricted to the southwest quadrant of Area I. A few very small fragments of bone were the only materials recovered from the ashy lens. The context could be the result of re-deposited hearth sweepings. Boundaries between [421] above and [423] below, were abrupt.

Unit [423] - The context is interpreted as a midden deposit that covered the entirety of Area I except where truncated by cut [413] in the southeast corner of the trench. Its matrix was a soft to friable silt mottled brown, yellow, and orange. Among the recorded inclusions were charcoal chunks (up to 10 percent of the matrix in discrete areas), occasional splotches of 1477 tephra in dumped turf, and infrequent patches of wood ash. One whetstone fragment was recovered from the context. Faunal preservation also appeared improved with more intact long bone fragments and tooth rows. This was likely the first post-1477 deposit (much of the stratum clearly sealed the 1477 tephra, registered as [428]). However, there is some indication that deposition might have occurred post-1630, based on a potential tephra fall, registered as [426].

Unit [426] was an *in situ* possible 1630 tephra and silt deposit. [426] extended over all of Area I with a maximum thickness of 5 cm. The deposit was friable and composed of dark gray tephra in/on a mid brown soil matrix, with lenses of yellow brown turf in the southwest corner. These turf lenses were observed to have possible 1477 tephra in them. A small amount of bone and occasional charcoal was found. [426] is covered by [423]. Sample #50.

Unit [428] was an *in situ* possible 1477 tephra deposit. The deposit extended over the eastern half of the trench and some of the western half, and was truncated by [413] and [430]. The deposit was 3-4 cm in depth and composed of a soft, fine green gray tephra. Ceramic and a small amount of bone were found in this context. [428] was covered by [431] and [426]. Sample #49.

Unit [430] was the fill of the cut [431] in the center of Area I. The matrix was a soft, yellow and orange silt with frequent charcoal inclusions. Iron and a moderate amount of bone were found in this context.

Unit [431] was the cut that truncated [428] in the center of Area I. Filled by unit [430].

Unit [432] extended over all of Area I, but was truncated by [413] in the southeast corner. The deposit is a maximum of 10 cm in depth, with the thickest areas to the south. [432] was composed of friable grayish brown silt with frequent black patches and considerable lenses of gravel against the southwest profile. Frequent charcoal and occasional peat ash lenses were observed. Copper alloy, iron and a large amount of bone were found. The deposit was interpreted as a charcoal rich midden deposit. [432] was covered by [428]. Identifying the interface between [432] and [433] was very difficult, they might be the same deposition. Two bags of charcoal samples were registered as #9 and #10.

Unit [456] = Unit [432] This context was excavated as part of [432]. It was treated as a discrete deposition during profile drawing and assigned its own number. Viewed in profile, the context contained much more peat ash than [432].

Unit [457] = Unit [432] Small gravel lens excavated as part of [432]. Treated as a discrete deposition during profile drawing.

Unit [433] extended from the southwest corner of the trench a maximum of approximately 1.8m to the north and 2 m to the west, and was truncated by [413]. The deposit was 1-8 cm in depth, with the greatest depth in the southern part of the trench and was diffuse to the east. The deposit consisted of friable orange-brown and very black silt with lenses of gray. An iron key and a moderate amount of bone were found. This has been interpreted as a mixed midden and turf dump with a high frequency of ash and charcoal. [433] was covered by [432]. Identifying the interface between [432] and [433] was very difficult, they might be the same deposition.

Unit [435] extended from the southwest corner of the trench approximately 1 m to the north and .35 m to the east. The deposit consisted of 1 cm of soft pinkish grey peat ash and silt with very frequent charcoal. A small amount of bone was found. [435] was covered by [433].

[436] extended over all of Area I, but was truncated by [413] in the southeast corner. The deposit was a maximum of 10 cm in depth, composed of soft to friable mottled orange/yellow brown silt and grayish brown gravel. This context has been interpreted as a mixed turf and gravel dump, possible for leveling purposes, with a small amount of charcoal and iron. A moderate amount of bone was found. [436] was covered by [433], and by a small area of [435].

[439] was an in situ tephra deposit, possibly H1300. This deposit was not continuous over Area I; it was patchy to the north side of the trench. The deposit was friable, up to 1 cm of green tephra on and imbedded in orangey-brown turf, with a total depth of 3 cm. Rare charcoal and bone inclusions were found. [439] was covered by [436]. Sample #48.

[440] covered all of Area I. The deposit was 8-18 cm in depth, composed of loose to moderately compacted gravel in mid to dark brown silt matrix, with yellowish-brown to

dark red/black turf lenses. The turfs contained tephra that were not in situ. Iron and a moderate amount of bone were found in this context. Context [440] may be interpreted as deposits associated with ground leveling activities. [440] was covered by [439]. Charcoal samples and registered as #28.

[443] extended over the east half of Area I, with uneven coverage. The deposit was 1-5 cm in depth, composed of friable to moderately compact brown to yellowish-brown silt and turf with a small amount of gravel. Iron and a small amount of bone were found. This context may be a turf dump, likely serving as ground leveling. [443] was covered and abutted by [440].

Context [444] covered all of Area I. The deposit was 10-15 cm in depth, composed of dark grey to dark yellow/brown loose to moderately compact gravel and silt with lumps and lenses of turf. The turfs contained tephra that were not in situ. The deposit may be interpreted as re-deposited turf and volcanic gravel with midden materials, possibly deposited for leveling purposes. Anthropogenic materials found were iron, charcoal and a moderate amount of bone. This context is covered by units [443] and [440].

Context [447] was an anthropogenic layer that extended throughout Area I. The context was 15 cm in depth, very firm and composed of 40 % brown silt and 60% purple-gray volcanic gravel .5-2 cm in size. A moderate amount of bone was found in this context. One possible interpretation of this unit is that people walking on poorly cemented bedrock eroded and redistributed the bedrock as pebbles concurrent with the deposition of anthropogenic materials. Unit [447] is covered by [444]. Wood samples and registered as #23.

[449] was a sterile, natural deposit on the southeast corner of Area I, directly above and falling into a fissure in the bedrock. The deposit was 5 cm and composed of firm mid-brown silt containing in situ possible 871 (sample #46) and 940 (sample #47) tephra. This context was covered by [447].

Context [450] fills a crevice in the bedrock and is the lowest anthropogenic context in Area I. The deposit is a maximum depth of 15 cm. It was composed of yellowish-brown loose to moderately compact silt containing degraded bedrock and a small amount of bone. Tephra was observed within [450], possibly Veiðivötn 940. This context was covered by [447].

The anthropogenic deposits bottomed out on sterile volcanic bedrock in distinct colors - purplish, pinkish and black. The bedrock was loose and fragmented easily, dislodging degraded bedrock pieces between 1 and 10 cm in size.

Final Remarks

The findings in 2013 have contributed additional, well-phased bone and artifacts. The 2013 excavation has added to the sample size of animal bone from the Middle Ages, rounding out the zooarchaeological assemblage and fulfilling a critical goal of the 2012

research proposal to the United States NSF. The discovery of the quite substantial structural remains adds an additional potential research area for future excavations. Remnants of activity around the structure, including midden disposal, intentionally leveled ground, and later, hay infields point to the shifting spatial mosaic of farm activities that become visible as our trenches provide windows into the past. Perhaps the most remarkable aspect of this excavation has been recovery of well-preserved midden remains from every century of occupation of the historic farm - inhabited continuously since the settlement period in the 9th-10th c.



NORSEC

Ongoing Zooarchaeological Work

Megan Hicks

Since the beginnings of work in the Mývatn area, zooarchaeological research has been among the central concerns of the research collaborations (McGovern et al. 2007). This previous work has included analysis of domestic mammal remains (caprines, bovines, horses and pigs) as well as wild species - a variety of avian species, local fish of the salmonidae family (trout and charr) and gadid fish from the marine coast (see also McGovern et al. 2006, McGovern et al. 2009, Hicks et al. 2014 and reports on nabohome.org). Analysis of the archaeofaunal assemblages excavated at Skútustaðir since 2008 is ongoing at the CUNY Hunter College Northern Science and Education Center (NORSEC) laboratories as the dissertation research project of CUNY Ph.D. student, Megan Hicks (advisor: Thomas H. McGovern). Prior work provides a regional comparative data for the ongoing analysis of archaeofaunal remains from Skútustaðir, from the Viking age (AD 871-1000) through the approximately 1910. The work is summarized in this section.

Beginning in 2012, additional funding from the National Science Foundation Office of Polar Programs has enabled the expansion of zooarchaeological inquiry in addition to ongoing fieldwork under the Dissertation Improvement Grant *Centennial Scale Human Ecodynamics in Skútustaðir, Mývatn N. Iceland* (Office of Polar Programs 1203268 PI McGovern and co-PI Hicks). Two major goals set out for the funding period 2012 through 2014 were i) to excavate additional faunal remains from the Middle Ages and ii) creation and testing a methodology toward the species level identification of avian eggshell recovered in ongoing midden excavations in collaboration with Kesara Ananthawat-Jónsson and Árni Einarsson (Faculty of Biology and Life Sciences University of Iceland).

The ongoing multistranded analysis of the zooarchaeological remains from Skútustaðir includes:

- Comprehensive zooarchaeological work in the Hunter College NORSEC laboratory (Hicks 2010, 2012)
- NSF funded eggshell identification project in collaboration with Haskoli Islands (Hicks et al. 2014 *in review*)
- Archival research on livestock management (Hicks 2014 *in press*)

Recovery of animal bone specimens during the 2013 excavation was successful; twenty one sample bags of animal bone were recovered which will fill in the slight quantitative shortfall for the middle ages chronological phase. Archaeofaunal remains from other phases will add to the excellent sample sizes already excavated in former years. In addition, samples of eggshell were taken which could eventually become useful to the ongoing study of intensive wild bird egg collection over time in this region (Hicks 2014 *in press*). It should be noted for future work, that the spatial patterning of midden material indicates that area around Area E4 was used more frequently for kitchen midden dumping in the Middle Ages, while the vicinity of Area I was used most commonly for this purpose perhaps in the early modern period.

Table 5 Skútustaðir 2013 - Number of Sample Bags of Bone recovered by Area and Chronological Phase

Trench E4	# Bags	Trench I	# Bags
Topsoil – 1717	2	Topsoil- 1717	9
1477-1717	2	1717-1477	4
1477-1104/1158	10	n/a	
Below 1104/58 – end of excavation	7	1477- possible 1300	4
n/a		1300- landnam	3
1410- bedrock	4	Unstrat.	2

Over two decades of above mentioned faunal analysis demonstrates some patterning in the record of animal use in the region and the data from analyzed remains from Skútustaðir connects with developing understanding of patterns. Such patterns indicate the presence of domestic animals, cows, sheep, goats, pigs and horses in the region since the first human settlements (McGovern et al. 2006, McGovern et al. 2007, McGovern et al. 2009). Cows had a central economic importance in the Viking age and approximately 1-6 sheep were kept per every cow. Sheep numbers compared to cows grew around the 13th century where herd composition in the Mývatn region seem to shift to keeping 1 cow per every 20-25 sheep approximately (Brewington et al. 2004, McGovern et al. 2007). In general, the majority of cattle remains found in Iceland are accompanied by a significant percentage of neonatal cow bones suggesting dairy was a major focus (McGovern et al. 2009). Pigs were commonly kept in the Viking Age but their numbers appear to decline and disappear by the Middle Ages. Horses seem to be managed primarily for transport but they are found disarticulated, in midden deposits, and may have been eaten occasionally. The practice of eating horses is understood historically to have been a normal mode during the viking age yet scrutinized after christianization. It was

apparently reconsidered in the early modern period; in one instance, eating horses was recommended by cultural commentator on farm household economics (Ungi 1893). Skútustaðir's zooarchaeological material so far falls in line with many of these general trends, especially with regard to livestock: observable age at death patterns among cattle bone suggest dairying was practiced in all phases. Pigs are, so far, not found in any context post-dating the middle ages and horses seem to have been rarely eaten (for detail see Hicks 2010). Sheep seem to be kept as a mixed herd in all chronological phases of occupation analysed thus far. Ongoing research (Hicks 2014 *in review*) is aimed at fully describing the character of post middle ages caprine economy and is briefly summarized below.

Beyond domestic mammals, hunting and fishing of wild animal species has left zooarchaeological traces that tell a unique economic story of this inland, lakeside region. Unlike most Icelandic settlements on the coast, Mývatn is centered on a freshwater lake. Therefore, the fish remains of various farm settlements reflect common use of *salmonidae*, trout and charr. The fish of the cod family, commonly partitioned, dried and traded from the coast to distant transoceanic locales are found in Mývatn as a whole, as a product being traded or transported fresh, not dried, 60 km inland from the coast (McGovern et al. 2006). In very recent work focusing on wild animal resource use McGovern et al. also suggests that climate cooling events of the 13th century spurred an up-tick in marine resource at the farm of Hofstaðir including the consumption of harp seals from the coast (2013). The preliminary temporal distribution of seal bones from Skútustaðir may also correlate with known cold periods when sea ice was common – possible evidence that multiple farms in Mývatn sought this resource in hard times.

As an outcome of investigation of other Mývatn sites - Sveigakot, Hrisheimar, Hofstaðir and Steinbogi - McGovern et al. describe a long term pattern of bird management from the settlement period under which ptarmigans are hunted and the eggs of ducks (*anatidae*) are collected (2006). The collected eggs are represented by the egg fragments in middens while the hunted birds, are represented by speciated bird bones identified from the same midden deposits. Both bird bones and bird egg shell are found in the long term midden layers excavated at Skútustaðir and are the subject of research for a new study bringing this research toward a long term picture of community level governance of wild resources (Hicks et al. 2014 *in review*). This potentially 1100 year, long term protection of *anatidae* for egg collecting was the inspiration for the current two part archaeological project underway which is working to devise a method of identification of bird egg shell and applying that method to archaeological remains.

In previous studies (McGovern et al. 2006), eggshell has been identified to the more general level of bird order, therefore the focus of these paleoeconomic studies has not been able to comment on use of birds for eggs at the level of species. With the technical and taxonomic expertise of Árni Einarsson and Kesara Ananthawat-Jónsson (Biology and Life Science Faculty, University of Iceland) a reference collection is being made of high magnification SEM photographs of modern egg shells. Approximately 25 species of bird are being described both qualitatively and quantitatively. This reference manual will then be used to identify the archaeological specimens. The archaeological specimens have preserved differentially, some being very degraded while others appear

to be very well preserved. Preliminary qualitative and quantitative observations suggest the presence of swans, geese and smaller anatidae among archaeological bird eggshell from Skútustadir. The work is ongoing in 2014 and 2015. Complementary ethnographic and historical work carried out by Ágústa Edwald (University of Aberdeen), focuses on Mývatn from the 19th century and onward documents records community management of bird egg collection through modern times.

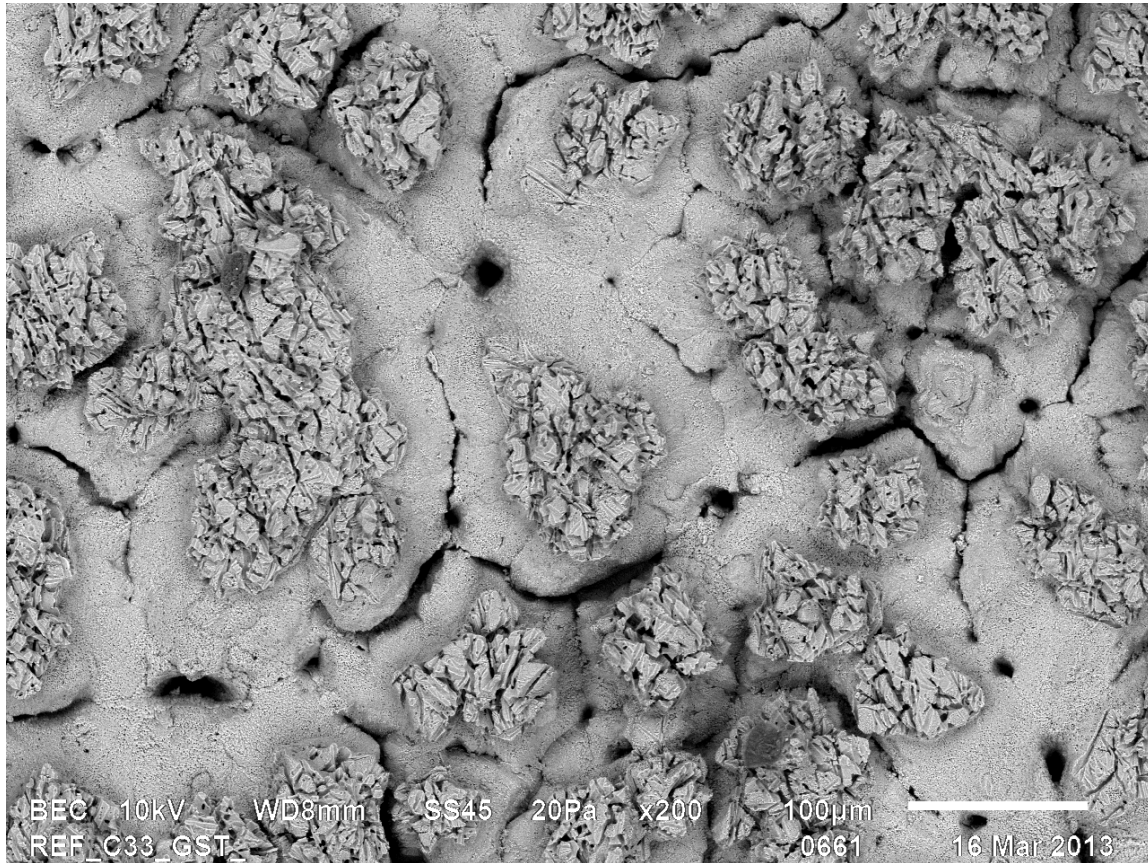


Figure 14 Image magnified to x100 of the egg of a *Gavia stellata*, the red throated loon. SEM photograph by Kesara Anamthawat Jónsson of the University of Iceland.

The additional 2012 funding from the NSF has also supported archival analysis of documents pertaining to animal holdings in Skútustaðir and its surrounding district, Skútustaðahreppur. These documents tally cows, sheep and horses by head belonging to each farmer in the district and the farm on which they reside from 1863 through the turn of the next century. They demonstrate a sharp change in the livestock ratios. The change entailed a rise in number of sheep kept from 1 cow per approximately 20-25 sheep known from the archaeological record and 1710 Jarðabók to 1:87 in 1882 (Brewington et al. 2004, McGovern et al. 2009, *JÁM*, Thingeyjarsýsla County Archive E 87 6 1882). Similarly, the nation's statistical register shows that the raw number of sheep doubled between 1703 and 1900 in the Northern region of Iceland (*Tölfræðihandbók* 1984, 70). This dramatic shift may have in part been due to critical political changes toward free market participation that offered opportunities for live sheep export (as argued in Hicks 2014 *in press*). Export also removed evidence of sheep proportions from the midden

remains being analyzed, which underscores the importance of the documents as a complimentary resource to the zooarchaeology for this time period. Beyond livestock numbers in the landscape, the same documents offer the chance for a detailed study of social structure, wealth difference, landscape use, animal economy and the interactions between all of these phenomena during a time of significant economic change. This work will produce an important final chapter - the archaeology of farming at Skútustaðir during modernization.

The long-term zooarchaeological assemblage from Skútustaðir is evidence of a farm and a farming region that has unique history of community level management of animal resource use and landscape use. This inland, lakeside region with a strong community organization was a production zone of changing, long-distance economic networks. These social and economic factors form part of the long-term story of the use of livestock and wild species that were hunted, collected and fished.

References – Excavation and Zooarchaeology Sections

Adderly, Paul, Ian Simpson and Orri Vesteinsson. 2008. “Local-Scale Adaptations: A Modeled Assessment of Soil, Landscape, Microclimatic, and Management Factors in Norse Home-Field Productivities.” *Geoarchaeology: An International Journal*, 23 (4): 500–527.

Brewington, Seth, Ramona Harrison, Colin Amundsen, and Thomas. H. McGovern. 2004. An early 13th-century Archaeofauna from Steinbogi, Mývatn District, Northern Iceland. NORSEC Laboratory Report No. 11

Clark, George (trans). 1997 Reykdæla Saga in *The Complete Sagas of The Icelanders*, Viðar Hreinsson (ed.). Leifur Eiriksson Publishing. Volume 4, pp. 257-302

Edwald & McGovern. 2008. Skútustadir Midden Investigations, Myvatn, Northern Iceland. NORSEC Zooarchaeology Laboratory Report. CUNY Northern Science and Education Centre, New York, NY, USA.

Edwald, Agusta & Thomas H. McGovern. 2009 Skútustaðir Midden Excavations, Mývatn, Northern Iceland 2009. NABO IPY project Field Report.

www.nabohome.org Edwald, Ágústa. 2012. Traditional Ecological Knowledge of Fishing and Egg Harvesting in Lake Mývatn, North East Iceland. Reykjavik: Fornleifastofnun Islands, FS497-12121

Hicks, Megan T. 2010. Skútustaðir: an Interim Zooarchaeological Report following the 2009 Field Season. NORSEC Laboratory Report No. 48 nabohome.org

Hicks, Megan, Adolf Friðriksson, Frank Feeley, George Hambrecht, Lilja Pálsdóttir, Garðar Guðmundsson & Magnus Á. Sigurgeirsson. 2012. Midden Excavations at Skútustaðir N. Iceland 2011. FS510-08274 Reykjavik, New York nabohome.org

Hicks, Megan, Árni Einarsson, Kesara Ananthawat-Jónsson, Agústa Edwald, Ægir Þór Þórsson, Thomas H. McGovern. 2014. *In review* Community and Conservation: Documenting Millennial scale resource use at Mývatn N. Iceland. in review –*Handbook of Historical Ecology and Applied Archaeology* Isendahl & Stump (eds.) Oxford University Press, New York.

Hicks, Megan. 2014. *In press* Losing Sleep Counting Sheep: early modern dynamics of hazardous husbandry in Mývatn, Iceland in *Human Ecodynamics in the North Atlantic: a Collaborative Model of Humans and Nature through Space and Time*. Ramona Harrison and Ruth Maher (eds.) Lexington Publishers, Lanham, Maryland.

JÁM: 1990. *Jarðabók Árna Magnússonar og Páls Vídalín*, Vols 1–11 (Land Register of Árni Magnússon and Páll Vídalín. Reprint of 1709– 1712 Copenhagen Edition). Reykjavik: Bókaútgáfa Menningarsjóðs.

McGovern, Thomas H. Sophia Perdikaris, Árni Einarsson and Jane Sidell. 2006. “Coastal Connections, local fishing and sustainable egg harvesting: patterns of Viking age inland wild resource use in Mývatn district, Northern Iceland.” *Environmental Archaeology*. 11(2)

McGovern, Thomas H., Orri Vésteinsson, Adolf Fríðriksson, Mike Church, Ian Lawson, Ian A. Simpson, Árni Einarsson, Andy Dugmore, Gordon Cook, Sophia Perdikaris, Kevin J. Edwards, Amanda M. Thompson, W. Paul Adderly, Anthony Newton, Gavin Lucas, Ragnar Edvardsson, Oscar Aldred, and Elaine Dunbar. 2007. Landscapes of Settlement in Northern Iceland: Historical Ecology of Human Impact and Climate Fluctuation on the Millennial Scale. *American Anthropologist* 109(1) 27-51.

McGovern, Thomas. H., Sophia Perdikaris, Ingrid Mainland, Philippa Ascough, Vicki Evans, Árni Einarsson, Jane Sidell, George Hambrecht and Ramona Harrison. 2009. The Archaeofauna. In Gavin Lucas ed., *Hofstaðir, excavations of a viking age feasting hall in North Eastern Iceland*. Reykjavik: Institute of Archaeology, Monograph No. 1

McGovern, Thomas H., Hildur Gestsdóttir, Seth Brewington, Ramona Harrison, Megan Hicks, Konrad Smiarowski & James Woollett. 2014. Medieval climate impact and human response: An archaeofauna circa 1300 AD from Hofstaðir in Mývatnssveit, N Iceland, *Journal of the North Atlantic*. Eagle Hill.

North Atlantic Biocultural Organization Zooarchaeology Working Group. 2010. NABONE Zooarchaeological Recording Package 9th edition, City University of New York.

Tölfræðihandibók 1984, Statistical Abstract of Iceland. Reykjavik: Statistical Bureau of Iceland.

Ungi, Karl. 1893. Óvenjur III. “Hrossakjöt.” *Fjallkonan* 10(26): 102.

Vésteinsson, Orri. 2008. Archaeological Investigations in Mývatnsveit 2007. Fornleifastofnun Íslands. FS386-02263. Reykjavík

Archived Sources

Héraðsskjalasafn þingeyinga [Thingeyjarsýsla Archives]:

Heyásetningarskýrsla og ásetningarskýrsla, Skútustaðahreppur. 1889, 1896 and 1882. E
87 6



Figure 15 Dice from the late Middle Ages phase of Skútustaðir [429] (pre 1410). Photo: Cameron Turley.

Skútustaðir 2013: a report on the finds

Mjöll Snæsdóttir

The registered finds from Skútustaðir 2013 are 186 numbers, but several of the numbers contain more than one fragment.

Glass

22 find numbers were glass, in all 161 pieces / fragments. There were both window glass and fragments of bottles (or other vessels) present.

- SKU13-61-003 a small bottle, complete, height 104 mm, diam. 30 mm. No colour. Lettering on base: 30.
- SKU13-61-006 7 fragments of green glass, probably all from the same bottle. Bottle has been 45 mm in diam., biggest fragment 86 mm high (long)
- SKU13-61-012 A lower part of a bottle, no colour, lettering near base: AKUREYR... height 67 mm, diam. 60 mm
- SKU13-61-024 2 fragm. of yellow-brown glass, from a bottle (or other vessel), the larger 20x16x4 mm
- SKU13-61-026 2 fragments, probably from the same object, the larger 27x19x5mm
- SKU13-61-027 25 fragments, of different sizes, among them 2 necks of small bottles
- SKU13-61-032 base of small bottle/vessel, ca half. Thick, light green
- SKU13-61-045 small fragment of clear window glass
- SKU13-61-057 14 fragments, 5 from window glass, 9 from bottles/vessels
- SKU13-61-058 6 fragments, 2 from window glass, 4 from bottles/vessels. The largest 52x23x4 mm
- SKU13-61-065 a small fragment of greenish window glass
- SKU13-61-076 a small fragment of light greenish window glass

SKU13-61-085	a small fragment of a bottle with painted decoration
SKU13-61-097	fragm. from bottle, greenish
SKU13-61-098	a small fragment of green glass, probably from a bottle
SKU13-61-101	2 small glass fragments, greenish, one of window glass, the other from a glass vessel (18x12x2mm)
SKU13-61-105	2 small fragments, light green, probably window glass, the larger 14x20x2mm
SKU13-61-109	4 small fragments, 2 from window glass. The largest one 17x13x2mm
SKU13-61-121	28 small fragments, at least 8 of them clearly window glass. Most colourless, a few green or pale blue.
SKU13-61-122	18 fragments, about half of them window glass, the majority colourless.
SKU13-61-140	7 fragments of different objects.
SKU13-61-155	42 glass fragments, 2 are window glass, 40 from bottles or other vessels, largest fragment 99x50x5mm

Glass objects found in Iceland are all imported. The earliest documentary mentioning of window glass is when the cathedral in Skálholt acquires a glass window in the late 1100s (Hörður Ágústsson 1990, 286). Window glass was for a long time uncommon in buildings other than churches, and was still rare as an object of trade in the late 18th century (Guðmundur Hannesson 1943, 121).

Most of the Skútustaðir glass finds from 2013 are fairly modern looking, and it would be most likely that they belong to the latter half of the 19th century or the 20th century. Bottles like the one marked AKUREYR[I] were in use until mid-twentieth century.

One very small glass fragment, SKU13-61-085, is from a bottle with a painted decoration. Similar bottle fragments have e.g. been found at Skálholt in 18th century contexts (Gavin Lucas 2002, 54).

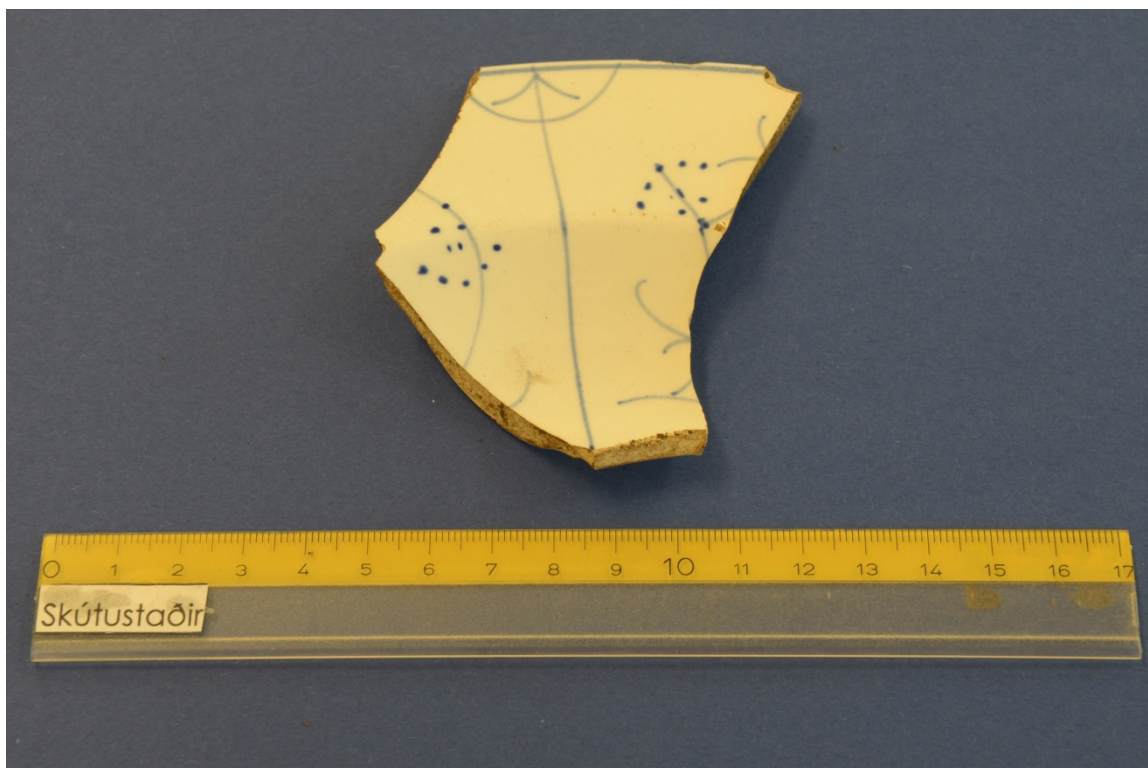


Figure 16 An example of whiteware from modern deposits at Skútustaðir.

Pottery / ceramics

45 find numbers are fragments of pottery /ceramics (292 fragments), the majority are whiteware, glazed, most of it patterned in white and blue, and of types that were in use in the late 19th and 20th century. There are six fragments of stoneware and six of porcelain.

SKU13-61-008	fragment of whiteware, glazed
SKU13-61-015	two small fragments of whiteware, glazed, the larger 20x7x3mm
SKU13-61-022	small fragment of stoneware
SKU13-61-034	small fragment of whiteware, glazed, 15x9x3mm. A drilled hole can be seen at the edge, probably for reparation.
SKU13-61-040	a small fragment of redware, glazed on one side, 15x8x3mm
SKU13-61-041	a fragment of whiteware, glazed
SKU13-61-042	rim fragment, porcelain(?), glazed, white
SKU13-61-044	a small fragment with raised decoration on one side, porcelain(?)
SKU13-61-053	fragment of insulation, porcelain
SKU13-61-060	rim fragment of a plate, whiteware, glazed, blue and white pattern, 27x19x5 mm
SKU13-61-061	rim fragment of a plate, whiteware, glazed, blue and white pattern, 27x19x5 mm
SKU13-61-062	rim fragment, whiteware, glazed, golden decoration
SKU13-61-063	small porcelain(?) fragment, a drilled hole, probably for reparation
SKU13-61-064	rim fragment from plate, whiteware, glazed, blue decoration
SKU13-61-066	fragment from a cup or bowl, porcelain?
SKU13-61-067	2 fragments, the larger 38x26x5mm, whiteware, glazed, one has part of a hank
SKU13-61-068	body fragment, salt glazed stoneware
SKU13-61-073	two small fragments of whiteware, the larger one 12x10x2mm
SKU13-61-074	3 fragm from 3 objects, the largest 29x12x3mm, whiteware, glazed
SKU13-61-082	24 fragments, the largest 16x15x3mm, whiteware, glazed

SKU13-61-084	33 fragments, the largest 55x55x5 mm, whiteware, glazed
SKU13-61-089	small fragment from whiteware, glaze missing
SKU13-61-092	small fragment of glazed whiteware
SKU13-61-093	5 fragments of whiteware, glazed, the largest 30x19x5mm
SKU13-61-094	3 plate fragments, the largest 50x37x3mm, whiteware, glazed, blue decoration
SKU13-61-095	2 small fragm., larger 12x7x1mm, yellow glaze on one side missing on other
SKU13-61-096	small white fragment, porcelain?
SKU13-61-102	30 small fragm., largest 22x19x5mm, 3 stoneware, 27 whiteware
SKU13-61-103	19 fragments, largest 42x22x5mm, whiteware, glazed, blue decoration
SKU13-61-106	MISSING 2014. Discarded? Listed as 2 fragments of pottery.
SKU13-61-107	15 fragments, the largest 16x14x2mm, mainly whiteware
SKU13-61-110	2 fragments, 1 whiteware, 1 stoneware, the larger 15x9x3mm
SKU13-61-115	11 fragments, the largest 35x26x6mm, whiteware, glazed
SKU13-61-119	2 small fragments, whiteware, glaze missing, larger fragm 22x10x2mm
SKU13-61-125	36 fragments, the largest 31x26x3mm, whiteware, glazed, blue decoration
SKU13-61-134	37 fragments, whiteware, glazed, blue decoration
SKU13-61-135	54 fragments, the largest 73x45x5 mm, whiteware, glazed
SKU13-61-136	31 fragments, the largest 30x25x5 mm, whiteware, glazed
SKU13-61-137	15 fragm., the largest 23x22x3mm, whiteware, glazed
SKU13-61-158	2 fragm., the larger 16x5x5mm, whiteware, glazed
SKU13-61-173	2 small fragm. of whiteware, the larger 12x10x2mm

Pottery is an import to Iceland. As far as we know objects of pottery were first made in Iceland in the 20th century (Guðrún Sveinbjarnardóttir 1996, 29; 85-6).

The value of the imported tableware of pottery can i.a. be seen from those instances where a broken object has been carefully mended by drilling holes in the fragments and sewing or tying the object together with thread. To make the mend waterproof the object was then boiled in milk. Drilled holes, presumably for such reparation, can be observed on two of the Skútustaðir 2013 finds.

Clay pipes

Three of the ceramic finds from 2013 were fragments of clay pipes, all three undecorated stem fragments.

SKU13-61-036	stem fragment, no decoration, l. 33 mm, diam. 9 mm
SKU13-61-038	stem fragment, no decoration, l. 20 mm, diam. 7 mm
SKU13-61-056	stem fragment, no decoration, l. 22 mm, diam. 8mm

Tobacco pipes of clay are known from the late 16th century (Mehler 2004, 131).

Clay tobacco pipes are frequently found in excavations in Iceland, in deposits from the early 17th century onwards (Mehler 2004, 133) e.g. from Bessastaðir, Skálholt, Hólar, Stóraborg, Viðey and Reykjavík, an indeed at most Icelandic sites where post-medieval remains have been uncovered. The oldest documentary evidence for the use of tobacco in Iceland is from the earlier half of the 17th century (Jón Ólafsson 1946, 15).

The pipes found in Iceland where the countries of origin could be determined are from the Netherlands, Germany, England and Scandinavia (Mehler 2004, 137).

Bone artifacts

7 artifacts or fragments of artifacts of bone are among the Skútustaðir finds from 2013.

SKU13-61-023	worked bone, broken across a drilled hole
SKU13-61-025	worked bone, a wedge (?)
SKU13-61-078	fragment of worked (?) bone
SKU13-61-117	a bone dice
SKU13-61-118	a bone dice
SKU13-61-151	a button, about half
SKU13-61-167	fragment of bone object
SKU13-61-179	worked bone, fragment

Among the bone artifacts there were two bone dice, SKU13-61-117 and SKU13-61-118. They are square (as dice later than the Viking Age usually are). The eyes that indicate numbers are placed in such manner that eyes on opposite sides always add up to the number seven. That is how modern dice are made, but in medieval times eyes could be placed differently. The eyes are made of a sort of „ring and dot“, an outer ring, an inner double ring and a dot in the middle.

The Skútustaðir dice were both found in the same context, and may be from a set of *kotra* (backgammon), in which game a pair of dice is used. In his book *Íslenzkar gátur, skemtanir, vikivakar og þulur* from the late 19th century Ólafur Davíðsson describes different games played with dice, among them *kotra*, which obviously has been known in Iceland for a long time. The author has the impression that this game has become somewhat unfashionable in thin times (see p. 306-307).

Dice are not always easy to date. Several dice can be found in the collection of the National Museum of Iceland (see Sarpur, culture history database, www.sarpur.is). Some of these are comparable to the Skútustaðir dice, but they are often without a secure dating, being stray finds or coming from private collections.

A pair of dice was recently found during an excavation of a religious house at Skriðuklaustur in eastern Iceland, that was established close to the end of the 15th century and was in function until mid-16th c. These dice resemble the Skútustaðir ones, although it seems that the eyes are arranged differently. (Steinunn Kristjánsdóttir 2012, photo on page 292).

Another pair in the collection of the National Museum of Iceland, thought to be made as late as the 1830-s, supposedly of walrus bone (tusk?) by the poet Sigurður Breiðfjörð (1798-1846), is also rather similar to the ones found at Skútustaðir.

The bone artifact SKU13-61-179 is flat, the edges on three sides are whole, one end is broken. On one side of the object there are marks made by a knife or a saw, the other side is polished. It is not obvious what this artifact may have been used for. No traces of wear can be seen, so it is possible that the artifact was not completed.

Another bone object, SKU13-61-025, has one flat side, and is likely to be a wedge that was used to fix or stabilize the joint of two wooden pieces, e.g. in a wooden box used e.g. for hay or wool (Icelandic: *meis*).

SKU13-61-023 is a piece of worked bone, that has broken across a drilled hole. This object could possibly have been intended to be part of a knife handle but unfinished.

SKU13-61-167 is a small fragment of a bone object, possible a bone pin with a flat head and a hole through it.

Synthetic textile and rubber

Among the Skútustaðir finds from 2013 there is one textile fragment, SKU13-61-127, a machine knitted tube of fine/thin thread, synthetic (nylon?). Its colour is a light gray-brown.

One of the finds, SKU13-61-161, is a fragment or strip of rubber, about 90mm long. Its sides are irregular, the piece is 3-4 mm wide.

Both these types of finds indicate that the contexts they are found in are recent, or from the 20th century.

Copper alloy

There were 11 find numbers of copper alloy among the finds from 2013.

SKU13-61-004	bullet casing (identified by the excavators as „22 short“)
SKU13-61-021	two fragments of copper alloy sheet, knitted together, the larger fragment
27x19x5mm	
SKU13-61-031	a small fragment of copper alloy sheet
SKU13-61-033	a small fragment of copper alloy sheet
SKU13-61-046	a small fragment of copper alloy sheet, folded
SKU13-61-069	a small fragment of copper alloy sheet
SKU13-61-071	a small fragment of copper alloy sheet
SKU13-61-080	a small fragment of copper alloy
SKU13-61-081	a nail, complete, four-sided, head 8x8 mm
SKU13-61-104	a small unidentified object, tear-shaped, possibly debris from metal-working
SKU13-61-108	a small fragment of copper alloy sheet

One of the copper alloy objects was a bullet casing, - already identified by the excavators as the “22 short“ . That type was used for handguns. “Many rifles in .22 Short were made between 1901–1940, mostly intended for gallery shooting and small game hunting.“ (information on Wikipedia, June 1st 2014) There are not many animals to hunt in Iceland, except foxes. Seals were sometimes shot, and different types of birds are hunted, but mostly with shot-guns.

It is supposed that the first guns were imported to Iceland in the later part of the 15th century, when they are now and then mentioned in written sources. Guns are thought to have been uncommon in the 17th and 18th centuries (Ólafur E. Friðriksson 1996, 14-15). In the 19th century guns became more common, and there were even a few Icelandic craftsmen who tried their hand at making guns (Ólafur E. Friðriksson 1996, 20-24). There is nothing unlikely about a Skútustaðir farmer in the late 19th- early 20th century owning a rifle and dropping a bullet casing near the farmhouse.

Among the finds are some fragments of thin copper alloy sheet (2 mm thick), that are most likely cut-offs from metal working, fragments of bigger sheets.

The find no <081> is a copper alloy nail/rivet, complete, as far as can be seen.

Iron

SKU13-61-001	14 fragments. The metal is thin and the pieces curved, could be from a pot/cauldron, or from iron hoops. Largest fragment 119x30x2 mm
SKU13-61-002	5 nails, or possibly one piece of wire
SKU13-61-005	piece of wire, rounded, 4 mm in diam.
SKU13-61-007	3 nails, modern, the longest 103 mm
SKU13-61-009	nail, point missing
SKU13-61-010	nail, head missing
SKU13-61-014	nail, big, point missing
SKU13-61-018	two nails, probably horse shoe nails, the longer 44 mm
SKU13-61-019	nail, big head, four-sided
SKU13-61-020	3 nails, the longest one 33 mm, + 1 fragment, possibly from the fourth
SKU13-61-037	iron fragment, probably from a machine
SKU13-61-043	iron fragment, unidentified
SKU13-61-050	nail (?) fragment
SKU13-61-051	nail, modern
SKU13-61-059	clothes pin spring
SKU13-61-075	staple
SKU13-61-077	small iron fragment, unidentified
SKU13-61-079	iron ring / loop
SKU13-61-086	nail, fragment (head diamond-shaped)
SKU13-61-087	iron fragment, unidentified
SKU13-61-090	fishing (?) hook
SKU13-61-099	a small nail(?) fragment
SKU13-61-100	a big needle ? (eye cannot be seen, because of rust)
SKU13-61-111	2 iron fragments, unidentified, length 4.33 and 0.94 mm
SKU13-61-112	4 small fragments, the longest (28 mm) could be a tang from a knife
SKU13-61-114	4 fragments, the largest 25x20x7 mm. One fragm. could be from a needle
SKU13-61-116	2 iron fragments, unidentified
SKU13-61-123	7 fragments, 3 from an iron sheet, 1 from a nail, others cannot be determined
SKU13-61-126	10 fragments, the longest 135 mm, possibly same as 001
SKU13-61-128	3 pieces of wire, one made of two strands. The longest 470 mm
SKU13-61-129	a flat piece of iron, unidentified
SKU13-61-130	a number of iron fragments, from thin material, from barrel hoops or something similar
SKU13-61-131	38 nails, 1 staple, 2 unidentified fragments
SKU13-61-132	a ring or cylinder, six-sided
SKU13-61-139	nail, modern, small head, bent
SKU13-61-141	4 pieces of wire, diam. between 3-4 mm, the longest piece 400 mm
SKU13-61-142	11 nails, whole and fragmented, the longest one 102 mm
SKU13-61-145	5 complete nails, modern, 3 nail fragments(?) and 2 fragments of twisted thin iron rod.
SKU13-61-146	3 small iron fragments, unidentified
SKU13-61-148	small iron key, seems complete
SKU13-61-149	a clench bolt, complete, the rove 20x22mm
SKU13-61-150	iron fragment, possibly from a tang

SKU13-61-152	possibly a clench bolt fragment
SKU13-61-153	a nail fragment (?)
SKU13-61-157	2 nails, 12 fragments
SKU13-61-159	2 fragments of an object with a loop, possibly a key
SKU13-61-164	2 fragments, one possibly from a crampon
SKU13-61-166	a small fragment, one end pointed, could be the end of a tang
SKU13-61-168	2 small fragments (from a nail?), the larger one 21 mm
SKU13-61-169	8 iron fragments, not identified further, the largest 35x10x8 mm
SKU13-61-170	nail, bent, with wooden remains

Most of the iron finds are nails (which is not uncommon in Icelandic excavations). Most of the nails found look fairly modern, and are obviously machine made. A number of them are even galvanized. But there are also some examples of hand-made nails and clench bolts. It is not unlikely that the clench bolts are from boats used on the lake. Among the iron finds there is also one (fishing?) hook, one key (possibly two), also remains of a big iron pot/cauldron and iron barrel hoops.

There are some fragments of wire, among them are pieces that seem to be from barbed wire. Barbed wire for fences was first imported to Iceland shortly before 1900, and other types of wire fencing a little later (Sigurður Sigurðsson 1937, 120). In the early 20th century there was a great increase in the fencing of infields, and even other areas. Laws passed in 1905 made it easy for farmers to get loans to fence their infields, and a certain sum was set aside in the state's budget just for that purpose yearly for a number of years (Sigurður Sigurðsson 1937, 120).

Coal

Three find numbers are fragments of coal (36 fragments in all). This is not a material that is naturally found in Iceland, and is of course an import. In the medieval times it was charcoal that was used for ironsmithing. On the other hand there is information on import of coal on a small scale to Iceland in the 17th century (Jón Aðils 1971, 464). From what can be seen of tables over "Value and quantity of imported goods 1625-1819" the yearly import of coal to Iceland varied and first exceeded 100 tons in 1796 (*Hagskinna*, table 10.5, p. 440-443).

SKU13-61-016	16 small fragments of coal), the largest 22x15x11mm
SKU13-61-154	12 fragments of coal, the largest 40x38x37mm
SKU13-61-156	8 fragments of coal, the largest 32x31x19mm

Stone

Thirteen find numbers from Skútustaðir 2013 are stone. Two of these should probably be discarded.

SKU13-61-013	small sliver of obsidian
SKU13-61-035	small sliver of obsidian
SKU13-61-039	a fragment of a whetstone, modern
SKU13-61-047	a small sliver of obsidian
SKU13-61-083	a whetstone fragment, much wear

SKU13-61-088	a small sliver of obsidian
SKU13-61-091	amygdale (?)
SKU13-61-147	a basalt pebble (should be discarded)
SKU13-61-165	a small stone, quartz(?)
SKU13-61-171	jasper (?)
SKU13-61-176	2 small stones, quartz
SKU13-61-180	a basalt pebble (should be discarded)
SKU13-61-183	a small stone, unidentified

Two of the stone finds are fragments of whetstones, a common group of finds in Icelandic excavations from different periods.

Among the finds are also stones with no signs of working on them, likely to have been collected either as toys or possibly for reasons to do with folk-beliefs. Uncommon stones were often considered to have special powers or supernatural qualities (Jón Árnason 1961, 645-653; Jónas Jónasson 1961, 410-411) and when such stones turn up on archaeological sites they may well have been brought to the sites because of this. Three fragments of obsidian belong to this group. The most likely origin for the obsidian is probably at Krafla (see Hughes & Lucas 2009, fig. 1, page 42).

Two of the find numbers (SKU13-61-147 and SKU13-61-180) were on examination seen to be ordinary pebbles of basalt. They have obviously been collected by mistake, and should be discarded.

References

Hörður Ágústsson, *Skálholt. Kirkjur*, Reykjavík 1990.

Jón Árnason, *Íslenzkar þjóðsögur og ævintýri* I. Nýtt safn. Árni Böðvarsson og Bjarni Vilhjálmsson önnuðust útgáfuna. Reykjavík 1961.

Guðmundur Hannesson, Húsagerð á Íslandi. *Iðnsaga Íslands* I, Reykjavík 1943, 1-317.

Jón Ólafsson, *Reisubók Jóns Ólafssonar Indíafara*, I, Reykjavík 1946.

Natascha Mehler, Tóbak og tóbakspípur á Íslandi á 18.öld. Vitnisburður úr uppgrefti við Aðalstræti í Reykjavík. *Árbók Hins íslenska fornleifafélags* 2002-2003, 131-150

Sigurður Sigurðsson, *Búnaðarfélagið. Aldarminning*, II. Reykjavík 1937.

Davide Zori, Nails, rivets, and clench bolts: a case for typological clarity. *Archaeologia Islandica* 6 (2007), 32-47

Richard E. Hughes and Gavin Lucas, Geochemical identification of the source for obsidian artifacts from the Viking settlement at Hofstaðir in Mývatnssveit, Northeastern Iceland. *Archaeologia Islandica* 7, 2009. 41-54.

Lúðvík Kristjánsson, *Íslenskir sjávarhættir* 1, Reykjavík 1980.

Steinunn Kristjánsdóttir, *Sagan af klaustrinu á Skriðu*. Reykjavík 2012.

Ólafur Davíðsson, *Íslenzkar gáttur, skemtanir, vikivakar og þulur* II, Kaupmannahöfn 1888-92.

Sarpur, culture history database, www.sarpur.is

Gavin Lucas, *Skálholt 2002. Preliminary reports* No 1. Fornleifastofnun Íslands, FS191-02131. Reykjavík 2002.

Ólafur E. Friðriksson, *Skotveiðar í íslenskri náttúru*, Reykjavík 1996.

Jónas Jónasson, *Íslenzkir þjóðhættir*. Einar Ól. Sveinsson bjó undir prentun. Þriðja útgáfa. Reykjavík 1961.

Hagskinna. Icelandic Historical Statistics, ed. Guðmundur Jónsson & Magnús S. Magnússon. Reykjavík 1997.

KAPI – sumarskóli 2013

Pétur Ingólfsson, Baldur Danielsson & Unnsteinn Ingason

Inngangur

Sumarskóli **Fornleifaskóla barnanna** eða **KAPI** námskeið var haldið dagana 22. og 23. júlí 2013. Í boði var námskeið fyrir tvo aldurshópa, fyrir börn á aldrinum 8-12 ára og 13-15 ára. Námskeiðið fyrir yngri hópinn var frá klukkan 13:00-16:00 báða dagana, en fyrir þann eldri var einn dagur í boði, frá 8:00-12:00. Þann 24. júlí var öllum þátttakendum ásamt foreldrum og/eða forráðamönnum boðið til grillveislu í Litlulaugaskóla í framhaldi af kynningardegi sem fornleifafræðingarnir sem þar dvöldu og unnu að uppgrefti á Skútustöðum í júlímánuði önnuðust.

Að undirbúningi komu þau Megan Hicks, Adolf Friðriksson, Pétur Ingólfsson og Baldur Danielsson. Verkaskipting var með þeim hætti að Megan með aðstoð frá Adolf sá um og skipulagði hinn faglega þátt námskeiðsins. Hún ákvað verkefnið og hvernig þau skiptust á milli hópanna, hverjir úr hópi fornleifafræðinga tækju þátt og gerði námslýsingar. Pétur og Baldur tóku að sér allt ytra skipulag, þ.e. auglýsingar og kynningar til barna og foreldra, skipulögðu ferðir og útveguðu farartæki, voru fararstjórar og sáu um hópinn þegar hann var ekki í formlegri fræðslu á vegum fornleifafræðinganna. Þá sáu þeir um þá skráningarvinnu sem nemendur unnu með Ipad-spjaldtölvum. Auk þess voru þeir bæði fornleifafræðingum og nemendum til halds og trausts eftir þörfum.

Námskeiðið var auglýst bæði í Hlaupastelpunni, auglýsingarit sem fer um alla Þingeyjarsveit og Mýflugunni, auglýsingarit í Skútustaðahreppi. Skráningarfrestur var til laugardagsins 20. júlí.

Alls skráðu sig 15 börn á aldrinum 8-12 ára og 9 á aldrinum 13-15 ára. Í yngri hópnum komu þátttakendur víða að úr Þingeyjarsveit og Skútustaðahreppi auk þess sem nokkuð var um börn annars staðar af landinu sem voru gestkomandi á svæðinu. Í þeim eldri var first og fremst um að ræða unglinga úr Vinnuskóla Þingeyjarsveitar og litið af hálfu sveitarfélagsins á námskeiðið sem hluta af vinnu þeirra og námi í tengslum við Vinnuskólann.

Nemendur þurftu að hafa með sér fatnað til útivistar og nesti. Fornleifaskólinn sá um öll námsgögn, skráningarblöð, áhöld til uppgraftrar og sigtunar og Ipad-spjaldtölvur til skráningar sem fyrst og fremst var gerð með ljósmyndum, en einnig með myndbandsupptökum og viðtölum við þátttakendur.

Markmið Fornleifaskólans með sumarnámskeiðunum

Sumarskólinn er ekki hvað síst til þess fallinn að þjóna þeim tilgangi Fornleifaskóla barnanna sem lítur að því að auka tengsl barna og unglinga á grunnskólaaldri og vísindamanna, með það að markmiði að opna nýjar leiðir í mögulegu náms- og starfsvali. Að kynna fyrirnefndu unga fólki vísindaleg vinnubrögð og aðferðafræði auk þjálfunar í samskiptum og erlendum tungumálum. Einnig að tengja saman ólíka hópa í samfélaginu, börn og foreldra, fyrirtæki og stofnanir, vísinda- og fræðimenn. Í Fornleifaskóla barnanna er fornleifafræði tvinnuð markvisst inn í kennslu á grunnskólastigi, jafnt vetur sem sumar, í hefðbundnu skólastarfi, opnum vinnustofum og sumarnámskeiðum á vettvangi fornleifarannsóknna. Einn af meginstyrkleikum í starfinu eru sterk tengsl við innlenda og erlenda fræðimenn sem starfa að fornleifarannsóknum í Þingeyjarsýslu.



Figure 17 KAPI students observe excavation and lend a hand by carrying material to the sievers elsewhere on site. Three students in the background learn how to read vertical levels.

Eldri hópur

Alls voru það níu krakkar á aldrinum 13-15 ára sem þátt tóku í námskeiðinu. Eins og áður sagði voru þau flest í Vinnuskóla Þingeyjarsveitar og var farið á bíl sveitarfélagsins ásamt bíl eins leiðbeinandans í hópnum. Þegar að Skútustöðum var komið tóku þau Megan og Adolf á móti hópnum og fræddu þau um hvað verið væri að gera á Skútustöðum og með hvaða hætti þau myndu síðan kynnast starfi og vinnubrögðum fornleifafræðinga aðeins nánar. Síðan var þeim skipt í þrjá hópa sem fengu eftirfarandi verkefni/fræðslu, sem stóð hvert um sig í um 30 mín áður en skipt var um verkefni.

Uppgröftur útskýrður

Megan útskýrði hið afmarkaða uppgraftrarsvæði, hvernig fornleifafræðingar höguðu vinnu sinni, eftir hverju þeir væru að leita, útskýrði sjáanleg öskulög og hvaða þekkingu fólk hefði öðlast á bæjarrústunum, samfélaginu sem þar hefði verið og síðan ekki síst mögulegum ábúendum.

Mælingar

Adolf útskýrði mælingar af ýmsum toga, sem m.a. eru framkvæmdar með hæðarmæli og eru nauðsynlegar þegar staðsetja þarf bæði ákveðna tóftarluta og muni sem fundist hafa.

Krakkarnir fengu síðan að spreyta sig á því að mæla og staðsetja ákveðna staði innan uppgraftarsvæðisins.

Sigtun

Brenda Prehal, Katie Grundtisch og Scott Schwartz leiðbeindu krökkunum um leyndardóma sigtunar. Hvers vegna sigtun er nauðsynleg við fornleifauppgroft og hvernig hún fari fram. Að því búnu tóku krakkarnir til við bera fötur með jarðvegi/uppgreftri frá fornleifafræðingum að sigtunarstaðnum og hófu síðan vinnu við sigtun með aðstoð og undir eftirliti.

Leiðsögn milli leiða

Að lokinni kaffipásu var farið með hópinn í kirkjugarðinn á Skútustöðum þar sem Adolf fræddi um mismun á útfararsíðum og greftrun í heiðni og kristni. Hópurinn fékk síðan það verkefni að komast að því hvenær fyrsta gröfin hefði verið tekin í garðinum og hver væri sú nýjasta.

Þess má geta að RÚV mætti með myndatökulið og fréttamann á svæðið, sem tóku upp myndir af námskeiðinu og þess sem þau ræddu við krakkana, Adolf og Megan.

Mat á því hvernig til tókst

Þessi hópur hafði til að bera mismikla þekkingu á störfum fornleifafræðinga. Sumir hverjir farið á nokkur námskeið hjá Fornleifaskólanum en aðrir voru að koma í fyrsta sinn. Heilt yfir voru þátttakendur áhugasamir, en úthaldið og einbeiting misjöfn. Þá er ljóst að viðfangsefnið höfðaði meira til sumra en annarra, sem mættu kannski fyrst og fremst til þess að sleppa við önnur verkefni á vegum Vinnuskólans. Þess ber þó að geta að þátttaka í námskeiðinu var valfrjáls. Ekki var lagt formlegt mat fyrir krakkana að námskeiði loknu.

Yngri hópur

Ytra skipulag

Námskeiðið var tvískipt og var fyrri deginum varið á uppgraftarsvæðinu við Skútustaði í Mývatnssveit, þar sem nemendur fengu leiðsögn um svæðið undir stjórn fornleifafræðinga. Síðari daginn var settur á svið uppgroftur fyrir ofan Litlulaugaskóla þar sem nemendur unnu samkvæmt hefðbundnum vinnubrögðum á uppgraftraustað.

Fyrri dagur

Haldið var af stað frá Litlulaugaskóla klukkan 13:00 og komið að Skútustöðum um kl. 13:30. Þar tóku Megan og Adolf á móti hópnum og tóku til við fræðsluna. Þar fékk hópurinn tveggja tíma fræðslu á vettvangi, áður en lagt var af stað til Lauga, um klukkan 15:30.

Hópaskipting og verkefni

Eins og þau eldri fengu þau yngri fræðslu frá Megan og Adolf um hvað verið væri að gera á Skútustöðum og með hvaða hætti þau myndu síðan kynnast starfi og vinnubrögðum fornleifafræðina aðeins nánar. Síðan var skipulagt hópastarf á sama hátt og gert hafði verið með eldri krakkana þar sem uppgröfturinn á staðnum var útskýrður og nemendur unnu að mælingum og sigtun.

Að lokinni kaffipásu fræddi Adolf hópinn um það hvað þyrfti að hafa í huga þegar fólk skimaði eftir mögulegum kumlastað. Hvar og í hvers konar umhverfi kuml hefðu iðulega verið tekin og einnig hvernig þau gætu litið út í dag – u.þ.b. 1000 árum síðar. Að endingu var farið með hópinn í kirkjugarðinn á Skútustöðum þar sem þau fengu sambærilega fræðslu og þau eldri.

Seinni dagur

Seinni dagurinn fór alfarið fram efst á skólasvæði Litlulaugaskóla. Þar höfðu þær Sant Mukh og Katie Grundtisch fornleifafræðinemar útbúið uppgraftarsvæði og komið fyrir nokkrum munum, sem krökkunum var ætlað að finna, greina og skrá. Að lokinni stuttu spjalli um dagskrá dagsins var hópnum skipt í fjóra smærri hópa. Einn fékk leiðbeiningar um uppgröft, annar sá um að sigta þann jarðveg sem upp kom, sá þriðji mældi og skráði þá hluti sem fundust og fjórði hópurinn myndaði allt ferlið á Ipad-spjaldtölvur og tók viðtöl – aflaði heimilda. Hver hópur vann að sínu verkefni í u.þ.b. 20 mínútur, en þá var skipt um starfstöð þannig að í lok dags höfðu allir fengið að spreyta sig á öllum verkþáttum.

Uppgröftur

Afmarkað hafði verið svæði sem var um 1 m² að stærð. Þar skiptust krakkarnir á því að grafa undir leiðsögn með þar til gerðum verkfærum. Jarðveginn settu þau í fötur sem nemendur er unnu við sigtun fjarlægðu jafnóðum. Þegar að munir fundust í heilu lagi var kallað á myndatöku- og mælingafólk sem skráði staðsetningu hlutarins. Þeim var síðan komið fyrir í réttum umbúðum.

Sigtun

Krakkarnir sigtuðu jarðveginn sem kom af graftarsvæðinu og settu til hliðar og í viðhlítandi umbúðir þá muni sem í ljós komu og afhentu skráningarhópnum.

Skráning

Skráningarhópurinn tók við þeim munum sem fundust við uppgröft eða við sigtun. Mældu og skráðu niður tilgátu um hvað og hvers konar hlutur hefði fundist á þar til gerð skráningarblöð.

Myndataka og viðtöl

Sá hópur sem vann hverju sinni við heimildaöflun myndaði uppgraftarferlið sem og allt annað sem fram fór á uppgrftarstað. Myndaði hluti þá og þar sem þeir fundust. Og tóku síðan viðtöl við þátttakendur eins og um væri að ræða efnistökin í heimildarmynd. Þá voru Ipadar einnig nýttir sem upptökutæki þegar þátttakendur lögðu mat á námskeiðið.

Mat á því hvernig til tókst

Í heildina séð tókst þetta mjög vel og almenn ánægja var hjá þátttakendum (sjá niðurstöður úr viðtölum). Á Skútustöðum hefði þó sá tími sem krakkarnir voru ekki beinir þátttakendur ekki mátt vera lengri. Á Laugum var helsta vandamálið fjöldinn, en það var á mörkunum að tími ynnist til að allir þátttakendur gætu prófað sig í öllum verkferlum. Æskilegt er því að takmarka þann fjölda sem kemst á hvert námskeið og halda frekar fleiri námskeið.

Eftirfarandi spurningar voru lagðar fyrir þátttakendur að loknu námskeiði:

1. Hvað er búið að vera skemmtilegast í dag og í gær?
2. Hvað var minnst skemmtilegt?
3. Hvað hefðir þú viljað gera öðruvísi?
4. Hvað ættum við að gera næst þegar verður Fornleifaskóli?

Eftir því sem best er vitað var ekki lögð sambærileg könnun fyrir þá fornleifafræðinga sem tóku þátt og leiðbeindu á námskeiðinu.

Opið hús og grillveisla

Miðvikudagskvöldið 24. júlí á milli klukkan **19:00 og 21:00** voru fornleifafræðingarnir sem unnu við uppgröftinn á Skútustöðum í Mývatnssveit með opið hús í Litlulaugaskóla þar sem þeir höfðu aðsetur. Til sýnis vorum.a. ýmsir gripir ásamt myndum af uppgreftinum, og sýnd skyggusýningin “Leyndardómar Skútustaðaminja. Aska, bein og brotnir munir”. Boðið var upp á grillaðar pylsur og tilheyrandi meðlæti. Allmargir gestir komu, bæði nemendur og foreldrar og aðrir gestir og nutu fræðslu og veitinga í góðu veðri.

Artifact photographs *The complete set of photographs is archived by FSI. Photo numbers are referenced in the artifact register of 2013.*



Figure 18 Modern glass from Area I context [405].



Figure 19 Modern glass including flat, non-bubbled windowglass from topsoil in Area I



Figure 20 Iron object most likely a fish hook from area I context [432]



Figure 21 Iron wire nails and machine cut iron nails from context [405] in area I.

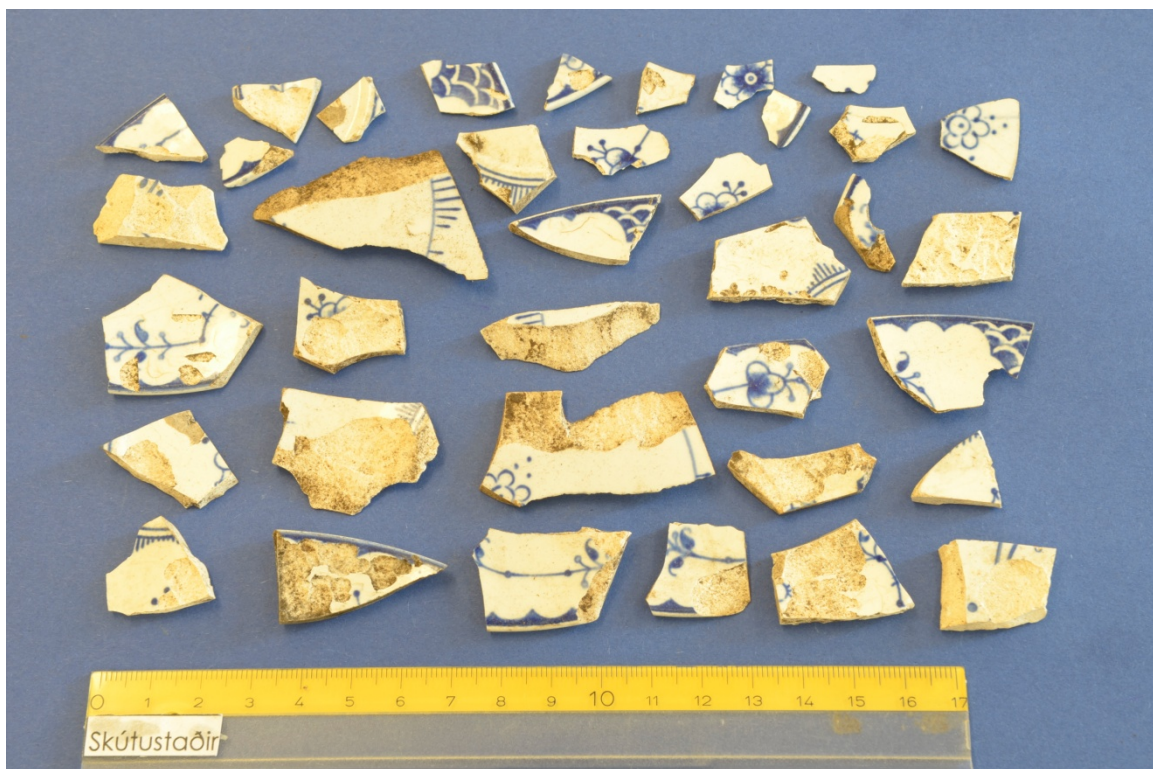


Figure 22 White earthenware fragments from a modern deposit [405] in area I.



Figure 23 Iron object, likely a key, from area I context [433].



Figure 24 Possible iron horse crampon from area E4 context [448].

Context number	Area	Type	Context Register 2013	Date registered	initials
400	E4	d	Topsoil	7/8/2013	meth
401	E4	d	Tephra (hypothesized 1717)	7/10/2013	meth
402	E4	d	Brown sandy silt with patches lenses of charcoal gravel and turf patches	7/10/2013	smk
403	E4	d	dark medium red brown silt with charcoal, gravel, midden	7/10/2013	smk
404	I	d	Gravelly mid brown soil and turf collapse	7/10/2013	bp
405	I	d	turf collapse or turf dump	7/11/2013	ff
406	E4	d	probable 1477 tephra	7/15/2013	ec
407	I	d	small deposit of red lava stone and black coarse sand	15/7/13	AE
408	I	d	turf dump or turf debris	15/7/13	smk
409	I	d	midden deposit	15/7/13	keg
410	I	d	mixed turf debris and dump	15/7/13	AE
411	E4	d	mid brown midden dump with charcoal	15/7/13	ec
412	I	f	fill of modern cut in area I	15/7/13	AE
413	I	c	cut for fill 412	15/7/13	AE
414	I	f	fill of fence post hole (wood debris found within)	15/7/13	AE
415	I	c	cut for fence post	15/7/13	AE
416	I	d	sterile mid brown with patches of black tephra?	16/7/13	keg
417	I	d	sandy tephra 1717 ?	16/7/13	AE
418	E4	d	probable 1410 tephra	17/7/13	SA
419	I	d	mix of turf debris and midden deposit	17/7/13	AE
420	I	d	brown grey midden with charcoal	17/7/13	EC
421	I	d	orange yellow deposit	17/7/13	AE
422	I	d	grey blue wood ash	17/7/13	EC

423	I	d	very mixed yellowish brown midden with frequent charcoal	17/7/13	EC
424	E4	d	turf dump with bone	17/7/13	MH
425	E4	d	brown silt with charcoal	18/7/13	AT
426	I	d	1630 tephra (?)brown soil matrix	18//7/13	AE
427	E4	d	Wall along west	18/7/2013	AE
428	I	d	1477 tephra	18/7/13	AE
429	E4	d	midden with wood ash	18/7/13	EC
430	I	f	small midden dump / fill of cut context 431	18/7/13	AE
431	I	c	cut of fill 430	18/7/13	AE
432	I	d	mixed charcoal rich midden deposit	18/7/13	AE
433	I	d	midden dump mixed black charcoal ash turfy	18/7/13	AE
434	E4	d	gravel around wall feature	18/7/13	MTH
435	I	d	grey and pink wood and peat ash dump	19/7/13	AE
436	I	d	mixed turf dump with occasional charcoal specks	19/7/13	AE
437	E4	d	cleaning under context 429	19/7/13	SS
438	E4	d	loose turf and gravel	19/7/13	
439	I	d	tephra in turfy matrix in situ	19/7/13	AE
440	I	d	gravel	19/7/13	bp
441	E4	d	possible tephra surface found across top of 442 removed with 442	19/7 13	MH
442	E4	d	turfy midden, mid brown, charcoal	19/7/13	MH
443	I	d	turf dump	22/7/13	CT
444	I	d	gravely fill with infrequent turfy inclusions	22/7/13	CT
445	E4	d	gravel mixed with brown silty sand and tephra	23/7/13	BP
446	E4	d	patches of tephra in light yellow brown soil	23/7/13	EC

447	I	d	loose purple gravel	23/7/13	EC
448	E4	d	light brown turf dump with frequent charcoal and bone inclusions	23/7/13	AT
449	I	d	turf lens in SE corner, extends beyond trench	24/7/13	KG
450	I	d	boney crevasse along N trench wall	24/7/13	KG
451	E4	d	1140/1158 Hekla tephra		
452	E4	d	brown silty soil with midden, charcoal and turf	25/7/13	MH/BP
453	E4	d	Grey green tephra in turf	25/7/13	
454	E4	d	light brown turf dump with low frequency of charcoal and bone	25/7/13	
455	E4	d	silty mid-brown with midden, charcoal, and lenses of landnam tephra in turf	25/7/13	MH
456	I	d	Multi-colored peat ash with charcoal fleck	27/7/13	EC
457	I	d	small gravel layer	27/7/13	EC
458	E4	d	in situ stones and turf, possibly structural	27/7/13	EC
459	E4	d	gravel layer with midden material	27/7/13	EC
460	E4	d	grey-brown ash with large charcoal and bone	27/7/13	EC
461	E4	tephra	re-deposited tephra (940?) sitting in/on turf and gravel	27/7/13	EC
462	E4	d	turf dump with stone and midden inclusions	28/7/13	MH
463	E4	d	turfy silt, waterlogged with traces of coprolytes? (sampled 10 buckets)end of excavation but not natural surface	28/7/13	MH

Environmental Sample Register 2013

Register#	Area	Context	Volume	# buckets / bags	Sample Description	Date Regist- ered	initials
1	E4	403	20L	2	medium dark red brown silt with charcoal gravel midden	16/7/1 3	EC
2	I	409	10L	1	midden deposit	16/7/1 3	EC
3	I	412	10L	1	fill of cut [413] mixed	16/7/1 3	AE
4	I	419	10L	1	mixed turf and midden	17/7/1 3	AT
5	I	420	10L	1	brown grey midden with charcoal	17/7/1 3	AT
6	E4	424	20L	2	mottled turf dump	17/7/1 3	BP
7	I	432	10L	1	mixed charcoal rich midden deposit	18/7/1 3	CT
8	I	433	20L	2	midden deposit	18/7/1 3	AE
9	I	432	small bag	1	charcoal	18/7/1 3	GP
10	I	432	small bag	1	charcoal	18/7/1 3	GP
11	E4	438	small bag	1	charcoal	19/7/1 3	GP
12	E4	411	small bag	1	charcoal	17/7/1 3	GP
13	E4	418	small bag	1	charcoal	17/7/1 3	GP
14	E4	424	small bag	1	charcoal	17/7/1 3	GP
15	E4	442	20L	2	turfy with charcoal	22/7/1 3	MH

16	I	444	10L	1	turfy gravel with charcoal	23/7/1 3	SMK
17	E4	446	medium bag	1	patches of tephra in it	23/7/1 3	ALT
18	I	450	10L	1	boney crevasse/fill	24/7/1 3	EC
19	I	449	10L	1	turf lense	24/7/1 3	EC
20	E4	448	20L	2	light brown turf deposit	24/7/1 3	GP
21	E4	446	medium bag	1	bone sample-C14	25/7/1 3	EC
22	E4	445	small bag	1	wood	25/7/1 3	EC
23	I	447	medium bag	1	wood	25/7/1 3	EC
24	E4	448	medium bag	1	charcoal	25/7/1 3	EC
25	E4	448	small bag	1	wood	25/7/1 3	EC
26	E4	448	medium bag	1	flora	25/7/1 3	EC
27	E4	442	medium bag	1	flora	25/7/1 3	EC
28	I	440	small bag	1	charcoal	25/7/1 3	EC
29	E4	400	medium bag	1	wood	25/7/1 3	EC
30	E4	400	small bag	1	wood	25/7/1 3	EC
31	I	409	medium bag	1	wood	25/7/1 3	EC
32	E4	452	medium bag	1	charcoal	26/7/1 3	EC

33	E4	453	small bag	1	charcoal	26/7/1 3	EC
34	E4	453	small bag	1	charcoal	26/7/1 3	EC
35	E4	455	small bag	1	charcoal	26/7/1 3	EC
36	E4	434	medium bag	1	flora	26/7/1 3	EC
38	E4	455	small bag	1	eggshell	27/7/1 3	EC
39	E4	455	medium bag	1	eggshell	27/7/1 3	EC
40	E4	455	small bag	1	eggshell	27/7/1 3	EC
41	E4	453	medium bag	1	tephra-is it 940 or top of 871?	27/7/1 3	EC
42	E4	460	10L	1	grey brown ash with large charcoal and bone	27/7/1 3	EC
43	E4	461	medium bag	1	flora	27/7/1 3	EC
44	E4	455	medium bag	1	charcoal	27/7/1 3	EC
45	E4	459	medium bag	1	charcoal	27/7/1 3	EC
46	I	449	medium bag	1	possible landnam tephra	28/7/1 3	CT,SM K
47	I	449	medium bag	1	possible 940 tephra	28/7/1 3	CT,SM K
48	I	439	medium bag	1	possible H1300 tephra	28/7/1 3	CT,SM K
49	I	428	medium bag	1	possible 1477 tephra	28/7/1 3	CT,SM K
50	I	426	medium bag	1	possible 1630 tephra	28/7/1 3	CT,SM K
51	I	417	medium bag	1	possible 1717 tephra	28/7/1 3	CT,SM K
52	E4	463	10L	10	turfy silt with gravel	28/7/1 3	GP,AT, MH

53	E4	403	1L	2	possible letrine	28/7/1 3	GP
55	E4	451	medium bag	1	possible 1104/1158 tephra	30/7/1 3	SMK
56	E4	406	medium bag	1	possible 1477 tephra	30/7/1 3	SMK
57	E4	403	medium bag	1	unknown tephra between possible 1717 and 1477	30/7/1 3	SMK
58	E4	401	medium bag	1	possible 1717 tephra	30/7/1 3	SMK
59	E4	446	medium bag	1	940 or landnam between bedrock	30/7/1 3	MTH
60	E4	451	medium bag	1	1104/1158	30/7/1 3	MTH
61	E4	406	medium bag	1	possible 1477	30/7/1 3	MTH
62	E4	403	medium bag	1	tephra within [403]	30/7/1 3	MTH
63	E4	401	medium bag	1	possible 1717 tephra	30/7/1 3	MTH
64	E4	418	medium bag	1	possible 1410 tephra	30/7/1 3	GP
65	E4	418	medium bag	1	possible 1410 tephra	30/7/1 3	MTH
66	E4	461	medium bag	1	charcoal	31/7/1 3	BP
67	E4	462	medium bag	1	charcoal	31/7/1 3	BP
68	E4	463	medium bag	1	charcoal	31/7/1 3	BP
69	E4	463	large bags	2	archaeo- entymological	31/7/1 3	BP
70	E4	455	10L	1	silty mid-brown	31/7/1 3	AT
71	E4	462	1L	1	archaeo- entymological	31/7/1 3	AT

Bone Sample Bag Register 2013

Register #	Trench	Context	Quantity of bags	Details	Date registered	Initials
1	E4	400	1	large ¼ full	25/7/2013	BP
2	E4	401	1	small ¼ full	25/7/2013	BP
3	E4	402	1	medium full	25/7/2013	BP
4	E4	403	1	medium full	25/7/2013	BP
5	E4	406	1	small bag 1 piece of bone	25/7/2013	BP
6	E4	Topsoil	1	Small, full	25/7/2013	BP
7	E4	411	1	large full	25/7/2013	BP
8	E4	418	1	Large ¼ full	25/7/2013	BP
9	E4	424	2	1 full bag & a ¾ full bag	25/7/2013	BP
10	E4	425	1	medium full	25/7/2013	BP
11	E4	427	1	small ½ full	25/7/2013	BP
12	E4	429	1	medium full	25/7/2013	BP
13	E4	434	1	medium ½ full	25/7/2013	BP
14	E4	438	1	large ¼ full	25/7/2013	BP
15	E4	442	1	medium ,full	25/7/2013	BP
16	I	Topsoil	1	Large, ¼ full	25/7/2013	BP
17	I	404	1	Large, ¼ full	25/7/2013	BP
18	I	405	2	1 full bag; 1 full bag of articulated bird	25/7/2013	BP
19	I	407	1	small ¼ full	25/7/2031	BP
20	I	408	1	Large, full	25/7/2013	BP
21	I	409	1	large full	25/7/2013	BP

22	I	410	1	Small, ¼ full	25/7/2013	BP
23	I	412	1	Large, full	25/7/2013	BP
24	I	417	1	Medium, ¼ full	25/7/2013	BP
25	E4	418 and Clean of fill 465	1	Medium, ¼ full	25/7/2013	BP
26	I	419	1	Small, ½ full	25/7/2013	BP
27	I	420	1	small , ¼ full	25/7/2013	BP
28	I	422	1	Small, ¼ full	25/7/2013	BP
29	I	423	1	Large, ¾ full	25/7/2013	BP
30	I	426	1	Medium, full	25/7/2013	BP
31	I	428	1	Medium, ½ full	25/7/2013	BP
32	I	430	1	Large, ½ full	25/7/2013	BP
33	I	432	1	Large, full	25/7/2013	BP
34	I	433	1	Large, ½ full	25/7/2013	BP
35	I	435	1	Medium, ¼ full	25/7/2013	BP
36	I	436	1	Large, ½ full	25/7/2013	BP
37	I	439	1	Medium, ½ full	25/7/2013	BP
38	I	440	1	Large, ½ full	25/7/2013	BP
39	I	444	1	Medium, full	25/7/2013	BP
40	I	443	1	Medium, full	25/7/2013	BP
41	E4	434	1	Large, 1/4 full large	26/7/2013	EC
42	E4	437	1	1/4 full large	26/7/2013	EC
43	E4	442	1	large full	26/7/2013	EC
44	I	444	1	1/2 full large	26/7/2013	EC
45	E4	445	1	large 1/2 full large	26/7/2013	EC
46	I	447	1	large 1/2 full large	26/7/2013	EC

47	E4	448	1	large full	26/7/2013	EC
48	I	450	1	1/4 full large	26/7/2013	EC
49	E4	451	1	1/4 full large	26/7/2013	EC
50	E4	452	1	1/4 full large	26/7/2013	EC
51	E4	453	1	1/4 full large	26/7/2013	EC
52	E4	454	1	1/4 full large	26/7/2013	EC
53	E4	455	1	¼ bag	26/7/2013	EC
54	E4	455	2	Large bags	27/7/2013	EC
55	E4	458	1	1/4 full large	27/7/2013	EC
56	E4	459	1	1/2 full large	27/7/2013	EC
57	E4	Cleaning from 1104/1158 to Bedrock	1	1/4 full large	27/7/2013	EC
58	E4	461	1	1/4 full large	27/7/2013	EC
59	E4	Unstratified	1	1/8 full large	27/7/2013	EC
60	E4	460	1	1/2 full large	27/7/2013	EC
61	E4	455	1	Sampled from under possible landnam, lensed in [455]	27/7/2013	EC
62	E4	459	1	1 mandible & 1 cleithrum	31/7/2013	BP
63	E4	461	1	1/4 full large	31/7/2013	BP
64	E4	462	1	1/4 full large	31/7/2013	BP
65	E4	463	1	1/4 full large	31/7/2013	BP