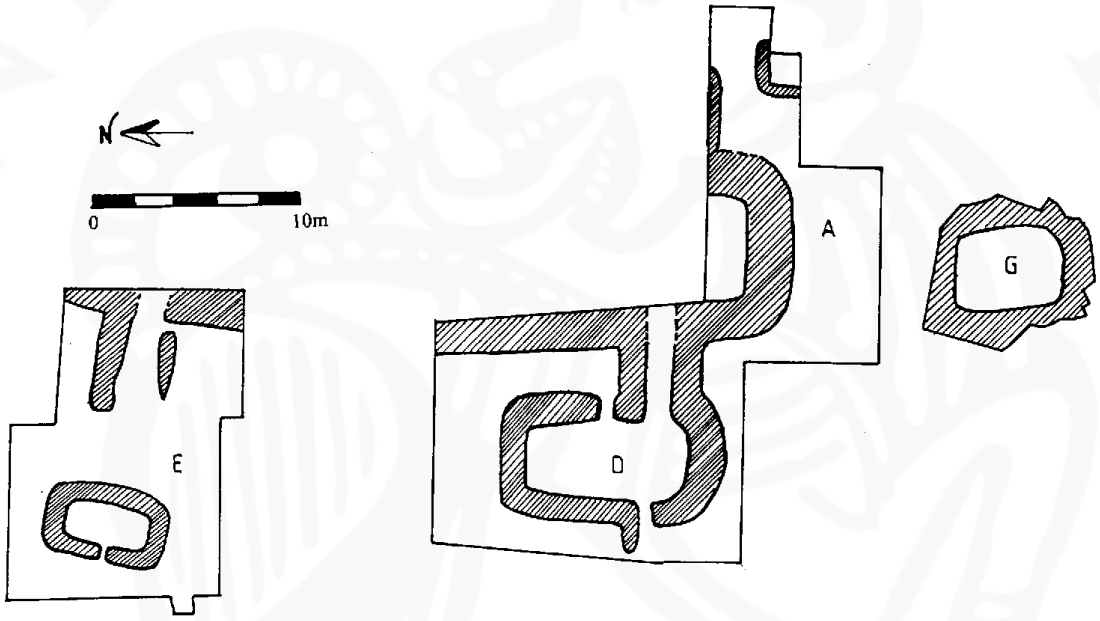
Hofstaðir 1998
Framvinduskýrslur/Preliminary Reports



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1.0 Hofstaðir 1998. Samantekt og yfirlit

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Inngangur

Árið 1991 hóf Fornleifastofnun Íslands rannsóknir að Hofstöðum í Mývatnssveit. Þær minni háttar athuganir sem gerðar voru árin 1991, 1992 og 1995 leiddu í ljós að á Hofstöðum voru kjöraðstæður til rannsókna á upphafi búsetu á Íslandi. Árið 1996 var því hafist handa við yfirgripsmikið rannsóknarverkefni og er fyrsta áfanga þess (1996-1998) nú lokið.

Áður hefur verið gerð grein fyrir árangri verksins árin 1996 og 1997 (sjá Adolf Friðriksson & Orri Vésteinsson 1996, 1997a-b, 1998) en hér verður rakin framvinda og árangur uppgraftarins 1998. Rannsóknin skiptist í nokkra þætti og hafa verið skrifaðar stakar skýrslur um hvern þeirra (sjá kafla 2.0-6.0). Í viðauka aftast í þessu skýrslusafni er að finna skrá yfir fundi.

Þessi skýrsla hefur ekki að geyma endanlega úrvinnslu uppgraftargagna, heldur er hún fyrsta samantekt og drög að túlkun á þeim mannvistarleifum sem rannsakaðar voru sumarið 1998. Ýmsum athugunum á þeim efnivið sem safnað var sumarið 1998 er enn ekki lokið, auk þess sem margar af þeim byggingaleifum sem í ljós komu eru ekki fullrannsakaðar og er því endanlegra niðurstaðna ekki að vænta í bráð.

Fornleifarannsóknir í Mývatnssveit hafa verið studdar af mörgum aðilum. Rannsóknarráð Íslands greiddi kostnað við fornleifauppgröft, Skútustaðahreppur fornleifaskráningu og Þjóðminjasafn Íslands, NABO, Hunter College, National Geographic, og háskólarnir í Sheffield, Stirling og Cambridge fornvistfræðirannsóknir. Samliða rannsóknunum var haldið námskeið í verklegri fornleifafræði. Námið sóttu 15 erlendir nemendur og styrkti ríkissjóður skólahaldið. Verkefninu stjórna Adolf Friðriksson og Orri Vésteinsson. Gavin Lucas hafði heildarumsjón með framkvæmd uppgraftarins og stjórnaði jafnframt uppgrefti á svæði A. Ragnar Edvardsson stjórnaði uppgrefti á svæði D, Howell M. Roberts á svæði E og Thomas McGovern á svæði G. Garðar Guðmundsson hafði umsjón með fornvistfræðirannsóknum á öllu svæðinu, Ian A. Simpson stjórnaði jarðvegsrannsóknum. Karen Milek jarðvegsfræðingur annaðist rannsóknir á gólflögum. Við rannsóknirnar unnu auk þeirra fornleifafræðingarnir Hildur Gestsdóttir og Mjöll Snæsdóttir. Auk fjárstuðnings sjóða og stofnana hefur Hofstaðaleiðangur 1998 notið aðstoðar margra Mývetninga, ekki síst Ásmundar og Guðmundar Jónssona á Hofstöðum. Hafi þeir bestu þakkir fyrir.

Í þessu yfirliti verða rifjuð upp heildarmarmkið verkefnisins og lýst stöðu rannsókna á hverju svæði.

Markmið

Markmið rannsókna á Hofstöðum er að rekja sögu búskapar og búsetu fyrstu kynslóða Íslendinga. Lögð er áhersla á að nota aðferðir fornleifafræði og fornvistfræði til að afla nýrra heimilda um þetta efni. Rannsóknunum er sérstaklega ætlað að varpa ljósi á nokkur samtengd atriði:

- ? húsakost landnema og þróun byggingakosts fyrstu áratugina.
- ? nýtingu auðlinda í umhverfi Hofstaða, einkum í sambandi við eldivið, byggingarefni og efni til smíða.
- ? innflutning á efni og matföngum.
- ? áherslur í skipulagi búskapar, veiða og húsdýrahalds, m.t.t. mataræðis og lífsafkomu
- ? áhrif náttúru og umhverfis (veðurlag og gróðurfar) á búskaparhætti frumbýlinganna og áhrif þeirra á umverfi sitt (beit, ræktun og efnisöflun).
- ? efnahag, félagsgerð, mannfjölda,

heimilisstærð og mótun samfélagsgerðar, einkum m.t.t. þróunar valds og mismunandi aðgangs að auðlindum.

Við úrvinnslu rannsóknargagna er teflt saman árangri uppgraftarins á Hofstöðum og heildarskráningu fornleifa í Mývatnssveit.

Við framkvæmd verkefnisins var þessum heildarmarkmiðum skipt upp í áfanga. 1998 lauk öðrum áfanga Hofstaðarannsókna sem staðið hafði síðan 1996. Undirmarkmiðin að þessu sinni voru að:

a) ljúka uppgrefti á svæði D,
b) ljúka uppgrefti á svæði E,
c) ljúka uppgrefti á fyllingu í gryfjunni á svæði G og
d) rannsaka suðurgafl skála A/B og samhengi hans og gryfju.

Þessum markmiðum var að mestu náð í sumar og verður árangurinn rakinn hér í stuttu máli.

Svæði A

Árið 1998 var nýtt svæði opnað við suðurenda skálans. Ljóst var eftir að rannsóknir hófust á jarðhúsi og fyllingum í G sunnan skálans 1995 og á afhúsi við suðvesturhorn hans 1996-7 að samhengi skála, jarðhúss og afhúsa yrði ekki fyllilega skilið án þess að rannsaka þetta svæði. Auk þess hafði ekki verið gengið úr skugga um hvort mannvirki væri að finna við suðausturhorn skálans árið 1908. Á uppdrætti Bruuns frá 1896 eru sýnd afhús bæði við suðvestur- og suðausturhorn skálans en síðarnefnda byggingin var ekki athuguð frekar og kemur ekki fram á síðari uppdráttum. Í rannsóknarskýrslum frá 1908 er fullyrt, að ekki hafi verið torfveggur fyrir suðurgafli skálans. Markmið rannsókna á svæði A sumarið 1998 var þríþætt:

a) að kanna afstöðu skála, afhúss D og jarðhúss G.
b) að leita áður óþekktra mannvistarleifa við suðausturhorn skála og
c) að kanna leifar suðvesturgafls skála.

Árangur uppgraftarins er rakinn í skýrslu Gavin Lucas, en hér verður gefið stutt yfirlit um helstu atriði.

Opnað var stórt svæði við suðurenda skálans, 17 m langt (A-V) og frá 3,4 til 9,4 m breitt (N-S). Svæðið var breiðara við suðurenda skálans og var þar grafið ámóta langt suðurfyrir skálagaflinn eins og inn í húsið, en austan við náði uppgraftarsvæðið ekki jafnlangt til suðurs. 1908 hafði aðeins verið grafið innan úr skálanum á þessu svæði nema á einum stað þar sem mjór skurður hafði verið grafinn í gegnum suðurgaflinn. Á uppgraftarsvæðinu komu í ljós byggingaleifar frá fjórum tímaskeiðum.

Mannvirki frá 18./19. öld.

Utan við skálatóftina, í suðausturhorni uppgraftarsvæðisins undir brekkunni ofan tóftanna, fundust nýlegar mannvirkjaleifar. Aldursákvörðun þeirra byggir á gripum sem í ljós komu og afstöðu til gjóskulaga. Til þessa hafa eingöngu fundist minjar frá 9.-11. öld við uppgröft á Hofstöðum. Hofstaðabændur minnast ekki að á þessum stað hafi staðið mannvirki og ekki er þess heldur getið í lýsingum fornfræðinga frá 19. og 20. öld. Ekki var annað eftir af þessum byggingum en óregluleg grjóthrúga sem sneri A-V og virðist vera norðurhlið á byggingu. Þessar veggjaleifar skera torfvegg sem einnig virðist vera norðurhlið á mannvirki, sennilega skylt hinu sem grjótveggurinn tilheyrði. Þessar veggjaleifar voru byggðar ofan í gryfju sem náði lengra til norðurs og hafði verið grafin í gegnum mun eldri byggingaleifar. Um þær verður fjallað síðar. Gryfjan sker gjóskulagið frá 1717 og er því yngri en það, líklega frá 18.-19. öld. Hlutverk þessara mannvirkja er ekki ljóst en töluverðar heyleifar fundust sem benda til að gryfjan gæti hafa verið heytóft.

Mannvirki frá 9.-11. öld.

Fyrir utan þau svæði þar sem jarðvegur var fjarlægður við uppgröftinn 1908 er allsstaðar jarðlagastabbi með gjókulögum frá 1104/58 til 1717 yfir minjunum, en LNS undir þeim.

Uppgrefti var ekki lokið á neinum af þeim

minjum sem komu fram sumarið 1998, en hins vegar fékkst mynd af svæðinu, sem gefur góða von um árangursríka framhaldsrannsókn:

A2

Austan við suðurenda skálans kom í ljós torfveggur sem virðist vera suðurgafl húss sem hefur verið sambyggt skálanum. Veggurinn er hlaðinn úr grágrænum streng og snýr A-V. Hann sést á 4.8 m kafla við norðursnið uppgraftarsvæðisins. Á yfirborði má sjá móta fyrir húsinu, enda teiknuðu Bruun (1896) og Brynjúlfur (1900) afhús við skálann á þessum stað. Bruun hefur hins vegar ekki grafið í það 1908. Á yfirborði minnir þessi bygging á D1, þ.e. afhúsið við suðvesturhorn skálans, að öðru leyti en því að A2 virðist hafa verið byggt upp við skálavegginn, en nokkuð bil er á milli skálans og D1. A2 lítur út fyrir að vera um 10 m langt og um 5 breitt. A2 er klárlega yngra en skálaveggurinn á þessum stað en að öðru leyti verður ekki sagt um gerð hússins eða afstöðu þess gagnvart öðrum mannvistarleifum að svo komnu máli.

A3

Um 3 m austan við suðausturhorn skálans, og 2 m sunnan við suðausturhorn A2 komu í ljós leifar af stakri byggingu. Lítið var eftir af henni þar sem hún hafði að stórum hluta verið eyðilögð þegar gryfja var grafin ofan í hana á 19. öld (sbr. að ofan). Þó sást norðurgafl og hluti af vesturvegg og virðist húsið hafa verið 2.2 m breitt og um 5 m langt. Sýnilegar leifar af veggnum eru allt að 0.6 m breiðar og er hann hlaðinn úr streng. Á vesturveggnum voru dyr sem höfðu verið fylltar upp. Húsið er í suðausturhorni uppgraftarsvæðisins og er suður- og austurhluti þess enn ógrafinn.

Suðurgafl skála (AB)

Hreinsað var ofan af suðurenda skálans, um 4 til norðurs frá suðurgafli. Í ljós komu torfhleðslur og tvöföld steinaröð sem að mestu leyti voru í góðu samræmi við teikningar Bruuns. Mannvistarleifar innan skálans voru ekki kannaðar að þessu sinni, heldur var lögð áhersla á að kanna suðurgafl hans og leita vísbendinga um jarðlagaskipan og samhengi við gryfjuna (G) og minjar við suðvesturhorn (D).

Í ljós kom að sú túlkun Bruuns og Finns Jónssonar um að enginn torfveggur hafi verið fyrir suðurgafli skálans er röng. Þar eru augljósar leifar af torfvegg úr klömbruhnaus. Bruun hefur grafið að þessum vegg, og talsvert inn í hann en af einhverjum ástæðum ekki talið hann uppfylla þær kröfur sem hann gerði til torfveggja. Í skýrslum talar hann um að pallur úr torfi hafi verið á þessum stað og á hann þar kannski við þessar veggjaleifar. Það er illskiljanlegt hversvegna Bruun sá ekki vegginn því hann er eins og aðrir veggir skálans sem grafnir hafa verið fram. Helst gæti munað að hér er hann ívið lægri en annarsstaðar. 1908 hafði verið grafið alllangt inn í innri hlið skálaveggjanna og við vesturvegginn sást að torfhleðslurnar hafa upphaflega náð að innri steinaröðinni og jafnvel upp á hana. Allt að 0,8 m af veggjunum voru fjarlægð við uppgröftinn 1908 og í suðvesturhorni skálans var grafið þvert í gegnum klömbruhleðsluna og suðurendi austurveggjar hafði einnig verið fjarlægður gersamlega. Á þessu svæði virðist skálaveggurinn allsstaðar vera tvískiptur, með um 1 m þykkri klömbruhleðslu að innan en óreglulegri strengjahleðslu að utan, sem virðist hafa verið heldur þykkari að vestan en austan. Frekari athuganir á ytri brún austurveggjar geta þó átt eftir að leiða annað í ljós. Suðurgaflinn er um 9 m að lengd að utanmáli. Engar dyr eru á suðurgafli.

Innbyrðis afstaða mannvirkja á svæði A, D og G.

Húsin sem stóðu austan við skálann (A2 og A3) voru reist ofan á uppmokstri og torfhrunslögum. Rannsóknin náði ekki til neðri laga að þessu sinni en þó mátti sjá að undir þessum lögum var grátt ruslalag (0106) sem svipar mjög til lags eða lagasyrpu sem fundist hefur víða á Hofstöðum (0004, 1004). Þetta lag fannst

yfir efstu ruslalögunum sem fylla jarðhúsið G, undir veggjum D1, D2, E1 og E2, en virðist ekki vera undir skálaveggjum á svæðum E og A. Sambærilegt lag sást einnig inni í skálanum. Ekki er ljóst hvort um sama lagið er að ræða á öllum þessum stöðum, en ljóst er að hvort svo er, er eitt mikilvægasta úrlausnarefni Hofstaða-rannsókna næstu árin. Að sunnan liggur 0004 að skálaveggnum en virðist ekki fara undir hann þó ekki sé það útilokað að svo komnu máli. Annaðhvort hefur lagið myndast eftir að skálaveggir voru reistir, eða það var fjarlægt á skálastæðinu þegar skálinn var reistur. Þar sem afstaða skála og 0004 er óljós, þá er fyrri túlkun (Adolf Friðriksson & Orri Vésteinsson 1997b) á afstöðu skála og jarðhúss í uppnámi. Við rannsókn 1995 var talið að ruslalagið sem liggur ofan á fyllingu jarðhússins gengi undir suðvesturhorn skálans. Nú er ljóst að það sem talið var suðvesturhorn skálans reyndist vera suðurveggur á tengibyggingu D2 við suðvesturhorn skálans. Verður því í næsta rannsóknaráfanga leitast við að finna nýjar vísbendingar um innri afstöðu skála og jarðhúss. Hafa komið fram áhugaverðar vísbendingar sem vert er að skoða nánar þegar rannsóknarsvæðið verður stækkað: á milli LNS og gráa ruslalagsins 0004 hafa víða komið í ljós lítilsháttar ummerki um mannaferðir. Á milli er þunnt lag af ljósleitri fokmold með dreifðum kola-flekkjum. Á suðursvæðinu hefur komið í ljós annað lag á milli 0004 og LNS. Það er ljósleitur jarðvegur með flekkjum af Heklu 3 í og er ljóslega uppmokstur úr forsögulegum lögum. Hefur það myndast þegar tekið var fyrir jarðhúsi, skála og jafnvel öðrum byggingum. Verður það viðfangsefni næsta rannsóknaráfanga að athuga hvort finna megi samhengi úrkastslaga frá jarðhúsi gagnvart skálagrefti. Einnig er nauðsynlegt að skoða dreifingu gráa ruslalagsins nánar. Það er fremur þunnt sunnan við skálann en er þykkara bæði austan og vestanvið. Það er einnig mjög þykkt og sumstaðar tvöfalt undir D1, þynnist út milli D og E og verður aftur þykkara og sumstaðar tvöfalt á svæði E. Bendir þetta til að lagið gæti hafa dreifst frá fleiri en einum upprunastað.

Svæði D

Árið 1998 var uppgrefti á svæði D haldið áfram en hann hófst 1996. Rétt er að rifja upp aðalatriði fyrri rannsókna. Bruun gróf ofan í ferhyrnda tóft við suðvesturhorn skálans en gaf nær enga lýsingu á henni utan að e.k. bygging hafi verið við hlið skálans á þessum stað, án dyra, og án sýnilegra umerkja annarra en að kolaflekkur var nálægt miðju. Árið 1996 var fyllingin frá uppgreftinum 1908 hreinsuð upp og 1997 voru gerðar nánari rannsóknir á húsinu, sem þá var farið að kalla D1. Kom m.a. í ljós að dyr hafa verið á sunnarlega á vesturvegg, sem höfðu verið fylltar upp. Einnig komu í ljós dyr á miðjum austurvegg. Á milli skála og D1 reyndust jafnframt vera byggingaleifar, D2. Árið 1998 var rannsókn á D1 lokið að mestu og reyndist þetta svæði mun flóknara í túlkun en útlit var fyrir í fyrstu, enda er um nokkur byggingarstig á sama blettinum að ræða. Þær minjar sem sáust á yfirborði eru leifar af yngsta mannvirkinu á svæðinu. Er það tóft eða hús úr torfi sem snýr eins og skálinn, þ.e. N-S, 11.20 m langt og 6 m breitt að utanmáli, en 8 m langt og 3,20 m breittt að innan. Veggir vestan, norðan og austan eru hlaðnir úr rauðleitu strengjatorfi. Veggirnir eru þannig gerðir að innan og utan á er 0,4-0,5 m breitt lag af streng en á milli er um 0,30 m moldarfylling. Suðurgaflinn er öðruvísi og virðist gerður úr hrun- og ruslalögum sem gætu verið eldri en torfveggirnir. Á húsi D1 eru þrjár dyr, tvær á austurvegg og ein á vestuvegg sem síðan hafði verið hlaðið fyrir. Ljóst er að húsinu hefur verið breytt, jafnvel nokkrum sinnum. Er mögulegt að dyrnar á vesturvegg séu elstar. Húsið hefur þá staðið stakt og ekki gengt úr því í skála. Síðan hefur verið fyllt í þær dyr og gerðar aðrar á austurvegg og göng (D2) yfir í skálann. Þá hefur austurveggurinn einnig verið rofinn norðan við göngin og þar eru þriðju dyrnar, annaðhvort til útgöngu eða þá inn í annað herbergi (D3) milli skála og D1. Inni í D1

var lag sem virðist hafa þakið botn hússins að mestu, en það hafði víða verið fjarlægt í rannsókninni 1908. Þetta lag er ekki líkt gólflagi, heldur er það bleik-brúnt að lit, að mestu úr plöntuleifum. Lagið er nú í greiningu, en það virðist einfaldlega vera hey og er sennilegt að á lokaskeiði hafi D1 verið e.k. hlöðutóft. Undir þessu lagi voru gólfleifar, sem virðast eldra stig á torfbyggingunni, en undir því voru stoðarholur og leifar af timburstokk, sem tilheyrt hafa timburhúsi er sneri N-S og var um 2.7 m breitt að innanmáli og a.m.k. 5.4 m langt. Þetta hús sneri eins og torfhúsið en hefur verið heldur mjórra. Stoðarholurnar liggja með reglulegu bili meðfram austur, norður og vesturvegg, en ekki er ljóst hvort þær hafi horfið í niðurgrefti við suðurenda, eða hvort timburhúsið hafi verið styttra en síðari byggingar á sama stað. Einnig er mögulegt að torfveggirnir hafi verið byggðir utan um timburhúsið, en ekki er fullt samræmi á milli stoðaraðanna og torfveggjanna. Talsvert meira bil er t.a.m. á milli hola og veggjar vestan megin en austan.

Í botni hússins eru þrjár holur: sú minnsta í miðjum norðurhluta, önnur stór í miðju húsi og sú þriðja skammt suðvestan hennar. Hinar fyrrnefndu voru undir heylaginu og tilheyra því eldra byggingarstigi. Ekki er ljóst hvaða hlutverki þær gegndu, en einn eldsprunginn steinn fannst í stærri holunni. Þriðja holan var full af kolum og ösku og í henni voru eldsprungnir steinar. Djúpar skorur voru við brúnir holunar, líkt og steinhellur hafi staðið þar upp á rönd. Holan sker eina stoðarholuna og gefur það til kynna að hún sé eldstæði frá síðari byggingarstigum D1.

Í suðurenda kom í ljós steinlögð stétt sem er í línu við dyrnar á austur og vesturveggjum. Gæti hún hafa verið lögð er D1 var tengt við skála um göngin D2, en þó er engin vissa fyrir því. Einnig er mögulegt að hún sé eldri og hafi verið framanvið suðurgafl timburhússins.

Allar þessar mannvistarleifar eru frá tímabilinu 9. - 11. aldar. LNS sést á stöku stað á svæði D. Eru elstu mannvistarleifarnar rétt ofan við LNS. Eins og áður er nefnt hefur grátt ruslalag (0004, 1004) sem er aðeins yngra en LNS fundist á öllum rannsóknarstöðum á Hofstöðum og er það með elstu ummerkjum á svæðinu. Þetta lag er einnig sýnilegt á nokkrum stöðum undir veggjum D1 og D2. Á a.m.k. tveimur stöðum á svæði D sést mannvistarlag, torfefni, undir 0004, en ekki er ljóst hvort það er vísbending um að á svæði D hafi staðið e.k. bygging áður en gráa ruslalagið myndaðist þar. Samskonar ummerki hafa komið fram á svæði E.

Við rannsóknir á jarðlagaskipan neðst í D1 voru tekin sýni úr neðstu lögunum og er niðurstaðna úr þeim athugunum að vænta innan skamms. Í næsta rannsóknaráfanga verða göngin D2 og svæði D3 könnuð nánar.

Svæði E

Árið 1998 var lokið rannsóknum á byggingaleifum á svæði E. Þar höfðu komið í ljós veggjaleifar við norðvesturhorn skála (E1) og skammt vestan þeirra voru leifar annars húss (E2). Leifar E1 voru mjög skemmdar af skurði E sem Bruun gróf langsum í gegnum svæðið 1908. Við síðari rannsóknir þar hefur verið gert ráð fyrir að E1 væri leifar af ferhyrndri og aflangri viðbyggingu, en erfitt er að fullyrða að svo sé. Aðeins sáust leifar langveggjar ("norðurveggur") sem nær frá skálavegg, um 5 m í vestur. Enginn torfhlaðinn vesturgafl var sýnilegur og einungis var að sjá mjóa rönd af meintum suðurlangvegg þessarar byggingar. Þessi veggjarstúfur náði ekki alveg að vesturveggs skála, heldur var um 0.70 m bil eða dyraop þar á milli. Talsvert rusl, einkum dýrabein, var í dyraopinu og við það. Hafi vesturgafl verið á E1, er ekki útilokað að hann hafi verið úr timbri, því í kverkinni yst við norðurvegg voru þrjár holur í röð sem gætu verið leifar eftir tréverk. Á milli þeirra var mjög þétt, dökkleitt og troðið lag sem gætu verið þröskuldur, en þar sem langskurðurinn frá 1908 var grafinn þvert í gegn um þetta svæði verður ekki fullyrt um þetta. Bruun

taldi engar dyr hafa verið á skálavegg á svæði E en það er rangt, því sjá mátti að op var þar sem E1 liggur að honum. Bruun hafði einungis fundið inngang í húsið austanmegin, sem snýr beint upp í brekkuna. Er sennilegt að E1 hafi verið aðalinngangur í skálann á einhverju stigi málsins. Þar sem ljóst er að einnig hefur verið gengt inn í skálann á svæði D minnir svipur hans æ meir á skálann í Skallakoti, en þar eru tveir inngangar á annari langhlið.

Þrátt fyrir að þessi hluti rannsóknarsvæðisins sé mjög skemmdur eftir rannsóknina 1908 var þess freistað að reyna að ráða í hlutverk E1 með nánari athugunum á neðstu jarðlögunum innan þess. Tekin voru sýni úr þeim, þ.á m. bleikbrúnu, lífrænu lagi sem minnir mjög á meint heylag í húsi D1.

Hús E2 er 3.40 m vestan við E1 og 8.30 m vestan við skálann. Jarðlög milli E1 og E2 gefa til kynna að E1 sé yngra en E2. E2 var allt að 5.80 m langt N-S og 3.80 m A-V að utanmáli, en 4.40 m og 2.10 m að innanmáli. Veggir þess voru hlaðnir úr streng, frá 0.60 til 1.05 m breiðir og er hæð veggjaleifanna nú um 0.20 m. Vesturveggurinn skar sig úr því að innan er hann hlaðinn með stóru grjóti. Á þeim vegg miðjum eru mjóar dyr með voldugum steinum til beggja handa. Innan við dyrnar er renna sem liggur meðfram nær öllum vesturveggnum inni í húsinu. Innan við hana voru fjórar stórar og djúpar holur. Yfir húsinu lá lag af hrundu torfefni. Þegar það var fjarlægt kom í ljós grunnt, bleikt og leirkennt lag blandað brúnleitri mold og stöku torfusneplum. Minnir þetta á meintar heyleifar sem fundist hafa í D1. Undir þessu lagi var síðan gráleita, víðförla ruslalagið 1004 sem er undir öllu húsi E2, undir veggjum og utanvið þá. Er E2 því yngra en gráa lagið. Þar sem 1004 nær aðeins að skálaveggnum virðist sem hann sé eldri en það og þar með eldri en E2, en ekki er þó hægt að útiloka á þessu stigi málsins að 1004 hafi verið fjarlægt við byggingu skálaveggjarins.

Í rennunni við vesturvegg E2 var gulbrúnt, leirkennt lag með miklu af fiskbeinum og lífrænum leifum. Voru þessi lög verið tekin í sýni í heild sinni til frekari rannsókna. Eiga þessar minjar sér ekkert fordæmi í íslenskri fornleifafræði og er það hulin ráðgáta til hvers þetta hús hefur verið notað.

Svæði G

Við rannsóknir 1908 og 1965 mátti sjá að gryfjan sunnan skálans var full af ösku, beinum og öðrum úrgangi. Árið 1995 kom í ljós að undir úrgangslögunum voru leifar af gólfi í jarðhúsi. Eru þessi úrgangslög talin vera frá 10. öld. Jarðhúsið var ekki kannað frekar, en er nýr rannsóknaráfangi hófst 1996 var ákveðið að leggja áherslu á að grafa fyllinguna sem nákvæmlegast til að greina dýrabeinin og aðrar leifar. Árin 1996-1997 var fyllingin grafin upp að hluta og árið 1998 var markið sett á að ljúka uppgrefti á fyllingunni. Því markmiði var náð og hafa öll ruslalög verið fjarlægð upp úr jarðhúsinu og blasir þar við torfhrun ofan í holunni sem væntanlega er hrunið þak- og veggjaefni yfir jarðhúsinu. Við rannsóknirnar 1998 komu í ljós sem fyrr mikið magn af vel varðveittum dýrabeinum; kiðlingar, kálfar, unglömb og grísir, sem og bein úr kindum, svínum, nautgripum og geitum. Þar fundust einnig fuglabein, eggjaskurn, skeljar og bein úr silungi og þorski eða ýsu.

Sýni úr öðrum úrgangslögum, ösku, koluðum viðarleifum og eldsmerktir steinar, voru tekin til frekari rannsókna og verður reynt að greina öskuna til uppruna. Til samanburðar var safnað sýnishornum af þekktu eldsneyti í nágrenni Hofstaða, þ.e. torf, mór, sauðatað, kúamykja, birki, lyng og hrís, en rekaviður og þang var sótt á ströndina við Skjálfanda. Verður þessum efnum brennt og reynt að einangra þau séreinkenni öskunnar sem geta hjálpað til að bera kennsl á samskonar ösku frá 10. öld.

Í ruslalögunum fundust sem fyrr nokkrir forngripir, þ. á m.: lítil stika eða skaft úr beini með krossi á endanum, mannbroddur, járnnaglar, brýni og perlur og perlubrot og járngjall.

Í næsta rannsóknaráfanga verður ráðist í uppgröft á jarðhúsinu sjálfu.

Niðurlag

Nú er lokið fyrsta áfanga rannsókna á fornbýlinu að Hofstöðum í Mývatnssveit. Er fyrri mynd af minjastaðnum nú gerbreytt. Áður var talið að þar hafi staðið stór, aflangur skáli, með suðurgafli úr timbri, ruslahola eða soðhola sunnan hans, en norðarlega við vesturhlið moldarbingur og tóftarbrot ögn sunnar. Í ljós hefur komið að skálinn er ekki eina húsið á staðnum, heldur er þar í raun þyrping húsa af ýmsum gerðum frá tímabilinu 880-1050. Elsta húsið er líklega jarðhúsið sunnan skála sem áður var talið vera soðhola, en ætla má að hafi verið fyrsti bústaður frumbýlinga. Fljótlegt hefur verið að reisa híbýli af þessu tagi til að veita mönnum og jafnvel skepnum skjól þar til ráðrúm gafst til frekari húsbygginga. Við suðvesturhorn skálans var torfhús sem skagar upp í að vera af sömu stærð og hinir minnstu eldaskálar sem fundist hafa á Íslandi. Þar áður virðist hafa staðið eldra hús úr timbri. Ekki er ljóst hvort það hús er eldra en skálinn. Á milli þessara húsa og skálans voru á einhverju stigi málsins byggð göng og jafnvel bætt við enn einu herbergi á milli skálans og þessa afhúss. Við norðvesturhorn kom í ljós að það sem áður var talið moldarbingur reyndist vera leifar af aflangri byggingu sem áföst var við skálavegg. Er sennilegt að hún hafi verið inngangur inn í skálann, e.k. forskáli. Skammt vestan hans var lítið, nánast ferhyrnt hús með undarlega stórum steinum í vesturvegg og rennu og fjórum stórum holum. Mannvirki af þeirri gerð hefur ekki fundist áður á Íslandi. Áður var talið að ekki hafi verið suðurgafl úr torfi á skálanum, en það hefur nú verið hrakið. Við suðausturhorn fundust leifar enn fleiri húsa: eitt aflangt fast við skálavegg og annað stakstætt skammt austar, en á milli þeirra er dæld sem gæti bent til að þar sé einnig jarðhús.

Ekki hefur enn verið skorið úr um byggingasögu Hofstaða að öllu leyti, en ljóst er að jarðhúsið tilheyrir elsta skeiði, næstelstar eru líklega eldri byggingar við suðvesturhorn skálans, þá stóri skálinn en síðar yngri byggingar í kring um hann bæði að austan og vestan.

Frumathuganir á beinaleifum benda til að Hofstaðabúar hafi víða aflað matfanga, þeir hafi nýtt sér til fullnustu veiðiskap á Mývatni en einnig lagt áherslu á skepnuhald með svipuðu sniði og þekkist frá seinni öldum. Fróðlegt verður að rýna í öskuleifar og komast að því hvaða eldiviður var notaður. Einnig er spennandi að bíða eftir niðurstöðum jarðvegs-rannsókna á gólfleifum úr Hofstaðahúsum, en þær gætu varpað nýju ljósi á hlutverk byggginganna.

Fyrirhugað er hefja nýjan, þriggja ára áfanga rannsókna 1999 í því augnamiði að afla enn frekari vitneskju um framvindu landnáms á Íslandi. Í þeim áfanga verður lögð áhersla á að ná fram heildarmynd af forsögulegum byggingaleifum á Hofstöðum. Jarðhúsið sunnan skálans verður grafið fram, byggingar við austurhorn hans, afhúsið við norðurenda skálans og allur skálinn. Vegna einstakra varðveisluskilyrða á Hofstöðum hefur verið unnt að greina í sundur mismunandi jarðlög á öllu uppgraftarsvæðinu, sem auðveldar mjög hið vandasama verk að rekja uppruna og þróun byggginganna. Samhliða uppgrefti munu rannsóknir á úrgangi, ösku og gólfleifum halda áfram. Að auki er fornleifaskráning í Mývatnssveit langt á veg komin. Lokið er svæðisskráningu í öllum Skútustaðahreppi (1250 minjastaðir) og hafa rúmlega 750 staðir verið skráðir á vettvangi.

Landnámsrannsóknir á mývetnskum fornleifum eru umsvifamestu fornleifa-rannsóknir á Íslandi til þessa. Í ljósi þeirra má lesa brot úr forsögu Íslands, jafnt um þá búnaðarhætti sem þekktust fram eftir öldum, sem þá er liðu undir lok fyrir upphaf ritaldar.

Hofstaðaminjar sýna að ekki svo löngu eftir að frumbýlingurinn þar ruddi sér lönd hafa afkomendur hans getað nýtt sér fjölbreytta landkosti í Laxárdal til búsetu

og viðurværis og skapað sér mikla auðsæld sem þegar sér merki á 10. öld. Er það ögrandi verkefni næsta áfanga að leita vísbendinga um hvaða forsendur lágu að baki þessum fyrsta sigri íslensks landbúnaðar á hrjóstugri fósturjörð.

Gavin M Lucas

2.0Area A Excavation Report

Introduction

1998 saw the opening of a new area of investigation at Hofstaðir, a large trench *c*. 17m long and 9.4m wide at the west, stepping in twice to a width of 3.4m at the eastern side. It was laid over the southern end of the Skáli which linked up with Area D to the west but stopped short of Area G leaving a standing baulk c. 2m wide. The aim of the investigation was primarily to establish the nature of the southern wall of the Skáli as Bruun had not recognized any structural feature substantial enough to stand as a back wall:

> Sondre gavl af rummet havde, som allerede berørt, ikke nogen egenlig jord-eller græstørvsvæg, men kun en 20 cm. høj, foroven flad, fodskammel som de, der ofte ses ved foden af bræddavægge.
>
> [As already mentioned, the southern gable of the room did not have a proper earthen or turf wall, but only a 20cm high flat-topped footing similar to those often seen at the base of walls made of wooden panels.]
>
> *- Bruun 1909, 270 - trans. M. Snæsdóttir*

A secondary aim of the trench plan was to identify any further activity or structures around this part of the site; for instance, it is known that Bruun on an earlier visit to the site noted a feature to the southeast of the Skáli while in 1900 Brynjúlfur Jónsson identified a field dyke/enclosure wall running parallel and east of the Skáli (Bruun 1897, 174-5; Jónsson 1901, 12-13 & fig.V). Bruun in his 1908 excavation did not investigate any area to the southeast. Beyond what previous investigators observed however, it was considered important to open up as large an area as possible precisely because a thorough understanding of the spatial layout of a site cannot be gained through trenching strategies focused solely on surface visible structures.

The excavation strategy followed that used previously on other areas, removal of all soil including turf and topsoil by hand and employing single context recording. Selected contexts considered suitable were sampled or sieved. The report given here presents the results of these investigations in phased sequence starting with the most recent remains and ending with the oldest features so far uncovered. Table 2.1 gives a full list of contexts uncovered while Figure 2.2 shows the stratigraphic matrix for the site; only in a part of the area was the beginning of the occupation sequence reached while subsequent fieldwork will be needed to complete this narrative. The phase groups are preliminary only and solely applicable to Area A.

Excavation Results

Four main phases of activity have been identified within Area A (Fig. 2.1) and these are discussed in reverse order, i.e. the latest first:

Phase IV *(20th century)*

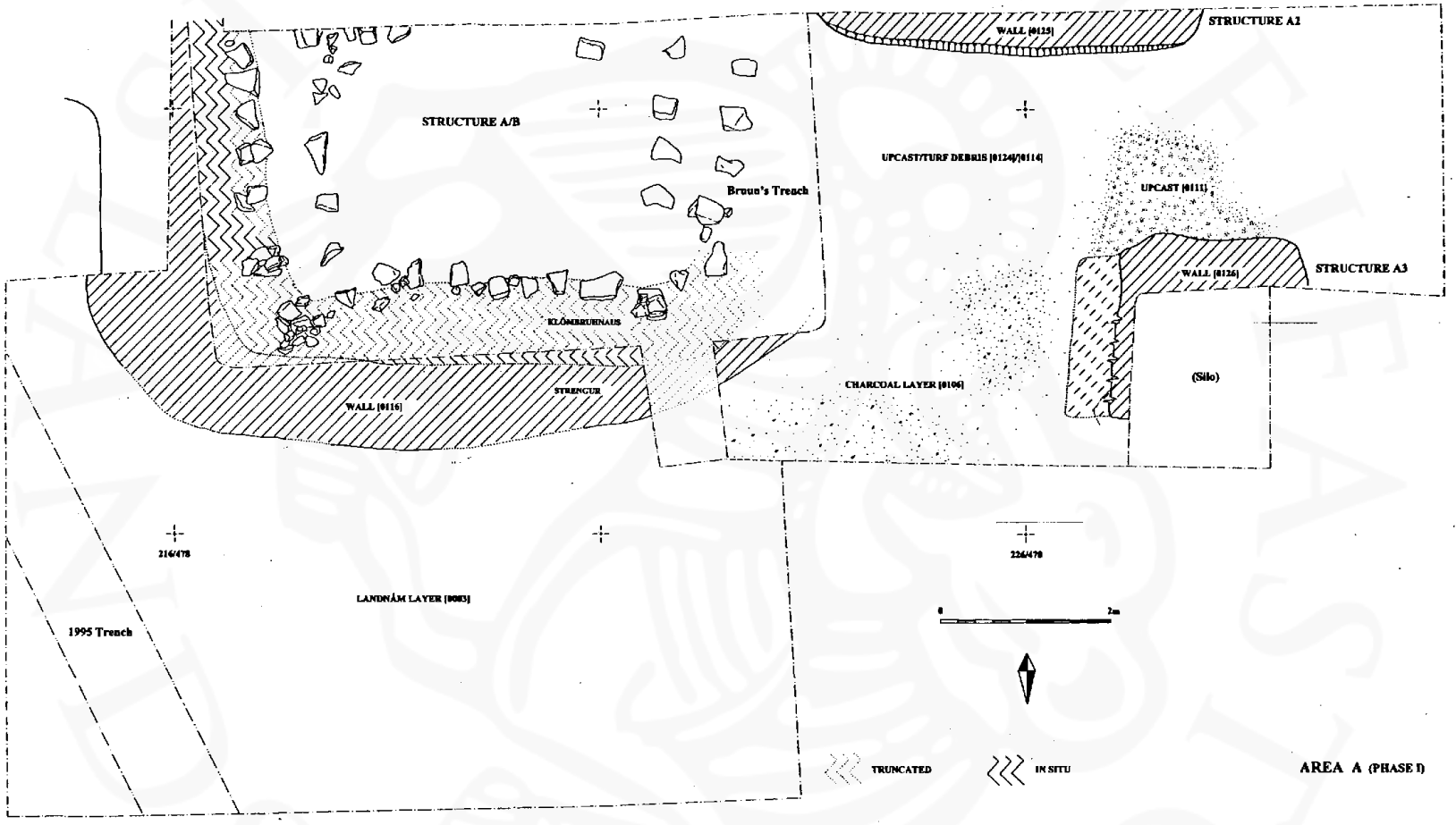
The latest activity identifiable in the area comprised previous archaeological investigations: running through the southwest corner of the open area was the 1995 FSÍ excavation trench ([0102]/[0103]) while coming out of the northern limit of excavation, Daniel Bruun's 1908 trench through the Skáli ([0002]/[0104]). Both merit a few words in terms of their relationship to the wider archaeology uncovered. The 1995 trench was originally cut to establish stratigraphic links between the sunken-floored building in Area G and the Skáli (A/B), but it was suspected after opening Area D and now corroborated, that this trench by-passes the Skáli wall and merely clips the collapse. This has ramifications for the interpretation of the relationship between the Skáli A/B and Structure G which will be discussed below.

Bruun's 1908 trench is interesting for the light it sheds on his excavation and interpretation of the site; it appears as though he directed his workmen to dig down from the top of the higher, eastern wall first and follow the wall down toward the interior of the Skáli, whence he either continued across or proceeded simultaneously from the other wall in also. The cut of his trench is very stepped along the eastern side suggestive of hesitant and changing tactics and indeed only one very small trace of the original wall was found here, the rest Bruun must have inadvertantly cut away. The western and southern walls are more intact along their length but even here it is quite clear that he removed *over 75%* of the wall from the inside before stopping, leaving only a thin spine of the original wall. The southern wall which he claimed not to see at all and at one point punched right through with a test pit, was clearly visible when his trench edge was cleaned. The reasons for his interpretation and perception of the structure are discussed in the concluding section, but they can be read in the 'archaeology' of his trench.

Phase III *(18th/19th century)*
An intense phase of structural activity was identified in the southeastern part of the area dating to the late 18th/19th century on the basis of associated finds and stratigraphic relationship to the 1717 Vatnajökull tephra. Three distinct sub-phases of activity occurred, the latest of which must have preceded the 1930s since the present farmers have no recollection of anything there; also, no mention is made of any ruins by Bruun or Brynulfur Jónsson at this spot, although if they considered them modern, they may not have mentioned them. These latest remains consisted of a stone footing [0100] for a small rectangular/square structure (Structure A1), possibly c. 3 x 2m in size although only the northern side extended into the excavation area. Only the base survived, consisting of a single course of irregular stones and turf set in a shallow foundation trench [0110] which cut the V1717 tephra layer. Its eastern extent is uncertain and may have been disturbed/robbed for the stones - no evidence for its presence was seen on the surface when we arrived and we must presume it was levelled sometime in the latter half of the 19th century/earlier 20th century.

It appears that this stone footing was a rebuild of an earlier turf construction [0105] on more or less the same spot but which lay a little to the northeast. This earlier wall had been truncated by the later stone footing down to within 0.1m of the base of the wall but left a substantial section of the wall upstanding on the northern side showing turf strengur construction. The original wall had probably been at least 1.4m wide and consisted of turf strengur (0.8 x 0.5 x 0.1m), surviving to a height of 5 courses (0.41m). These two phases of Structure A1 postdate a square/rectangular silo pit [0108] which had been cut nearly 1m deep into the ground and has an estimated size of 3-4 sq.metres. It had internal partitions marked by linear slots in the base for holding timber or stone uprights (since removed) and a scatter of ash [0117] over the base, possibly as a floor surface to minimize dampness. After abandonment it was deliberately backfilled with turf and midden material, incorporating lenses of decomposing hay suggesting its storage purpose. More recent but abandoned hay silos are known a little further southeast upslope, suggesting this was an area used for hay storage over a period of time. Perhaps the most significant aspect to the location of this silo however is that it appears to have utilised the interior of an even earlier structure (what was probably a ruin at the time) - this is discussed below in Phase I.

Phase II *(12th-18th century)*
This phase is marked more by a long period of relative inactivity than any


STRUCTURE A2
WALL [0125]
STRUCTURE A/B
UPCAST/TURF DEBRIS [0124]/[0114]
Braun's Trench
UPCAST [0111]
WALL [0126]
STRUCTURE A3
KLÖMBRUBNAUS
STRENGUR
WALL [0116]
CHARCOAL LAYER [0106]
(Silo)
216/478
226/470
LANDNÁM LAYER [0085]
1995 Trench
0
2m
TRUNCATED
IN SITU
AREA A (PHASE I)

16

15

occupation phases and is characterised by two sub-phases of windblown soil accumulation across the area. For most of this period, there is a fairly rapid and sterile aeolian deposition of fine pale brown silts (loess), which include two identified tephra layers (V1717 and "a" V1477) and probably others not seen which are much finer and less continuous (such as V1410, H1300, K1262 and possibly H1104/1158; see Sigurgeirsson 1998). This layer [0016] occurs continuously across the site; beneath it lay another, less extensive layer [0109] which covered the Skáli and the eastern part of the area but feathered out to the west and south. This had a similar loess matrix but incorporated some charcoal and decayed organic elements giving it a slightly sandier texture and darker colour. Its boundary with [0016] was not sharp and what it represents is a period after the abandonment of the site in Phase I when there was still cultural activity in close proximity but whose cessation is marked by the gradual transition to the sterile loess above.

Phase I (9th-11th century)

The Hekla 1104/1158 tephra was never unambigously identified in Area A this season but on the basis of its position observed elsewhere on the site, any deposits sealed beneath [0016] in this area have provisionally been dated to the pre-12th century. Excavation of previously undisturbed contexts from this earliest phase of the site did not progress very far this season, nevertheless a substantial picture of what is present has been gained with good expectations for a subsequent season. Broadly two main sub-phases of structural activity have been identified, the latest including two small structures (A2 and A3) and the earliest belonging to the construction of the Skáli (A/B). A possible fourth structure is also being considered although the only indication of its presence so far remains a depression in the overlying deposits, a depression which was first noted at the 1477 tephra level where it was very marked. The depression may have been caused merely by the sloping deposits coming from Structures A2 and A3 but another possibility could be a sunken-floored building and although confirmation must await further excavation, this much we can say, that if there is a structure beneath these deposits, it belongs to an early phase of the site, contemporary with or even earlier perhaps than the Skáli and the sunken-floored building in Area G.

Of the structures we have so far exposed, Structures A2 and A3 are the latest, although their relationship to each other remains to be resolved. They are situated to the east of the Skáli, Structure A2 appearing to be connected to/abutting it while A3 lies around 3m to the southeast. All over the eastern side beyond the Skáli are various deposits of turf collapse, which lower down inter-digitate with other upcast and midden-type ashy deposits. Of the upper layers, three discrete contexts ([0118], [0119], [0120]) appear to represent different episodes of wall decay and collapse from Structure A2 which is defined at present by a single east-west length of turf strengur wall [0125] coming out of the Skáli for 4.8m before returning beyond the northern limit of excavation. On the surface there is some indication of its extent northward suggesting a structure comparable to D1, i.e. about 10m long and 5m wide. Its comparability to D1 is further made significant by the fact that it has been untouched by Bruun although other activities may have done some damage. This is the case with Structure A3 which although had a little more of its plan uncovered, suffered from the later post-Medieval insertion of a silo pit through its interior.

Two sides of Structure A3 suggest a building 2.2m wide and c.5m long, although only half of its length occurs within the trench, the limit of excavation running through an apparent blocked

doorway opening to the west. The wall [0126] survives to a width of 0.6m along the northern side and is constructed solely from turf strengur. In size it is slightly smaller but comparable to Structure E2, especially in the position of the doorway but given that all internal features appear to have been cut away by the silo, there is no way of knowing how comparable it may have been in terms of function. Initial observations also suggest this may be a rebuild of an earlier structure but this must await confirmation. Both Structures A2 and A3 were constructed over upcast dumps ([0124], [0111]) and other turf collapse ([0114]) which spreads over the eastern part of the area. This was the level at which excavation ceased and these deposits display fairly complex inter-digitation suggestive of simultaneous deposition, whether gradually or rapidly. Whatever the sequence, one thing does seem probable, and that is that a very early charcoal-rich layer [0106] continues beneath these deposits but stops at the Skáli wall indicating that both Structures A2 and A3 post-date the Skáli by some length of time.

This charcoal-rich layer [0106] is partly equivalent to [0004] in Area G and has been a key marker horizon for much of the interpretation on the site since 1995. Its status is undeniably significant but some care must be taken with its identification across the site as a single deposit. The layer designated [0106] in Area A is a fairly charcoal-rich, dark grey brown sandy silt which is very thin (<10mm) south of the Skáli, thickening to the east and west which may suggest two sources. At the western limit in Area A where it joins Area D, there was a suggestion of two different layers separated by some turf collapse and the same appears to be the case for the eastern edge. Both limits need careful investigation next year. The principal finding this season though was the relation of this layer to the Skáli wall.

While there is no question that turf collapse [0112] from the southern end of the Skáli seals layer [0106], this layer cannot be seen coming beneath the actual wall itself. Either the construction of the Skáli cut through this layer or it formed up against it; without further investigation this is not resolvable, but it is hoped that next season's work on the interior of the Skáli may aid this. Nevertheless, what was observed in the 1995 trench was the wall of structure D2 sealing the [0004] layer, not the Skáli and it re-opens the question of the relationship of the Skáli to the sunken-floored building in Area G, and concurrently, all the interpretations of the development of the site. However, there are further events brought to light this season which may prove promising and these will be discussed in a moment; first, something must said about the construction of the Skáli as it has been investigated so far.

The portion of the Skáli re-excavated covers only the southern 4m but was sufficient to fully expose the walls and part of the interior; the plan recovered is very similar to Bruun's, at least in terms of the double stone lines although he appears to have missed or not drawn a few of the outer line along the southeast side. Moreover, as he observed, the longhouse walls were constructed in herringbone fashion (*klömbruhnaus*) and the structure at the southern end is c. 9m wide (outer edges). The main difference is not in the precision of the record but in failures of perception, primarily that the southern wall actually does exist which we found to survive to a comparable extent as all the other walls. Moreover, this wall and the other east and west walls actually started much further in than he indicates, at least upto if not over the outer line of stones and *not* where his trench stopped. Our record of the Skáli wall at this point [0116] thus shows it to have been a turf wall, probably over stone pad footings spaced 0.2-0.4m apart, the turf consisting of small 'bricks' (L0.2, W.0.2, Th0.1m) arranged in herringbone fashion. Its minimum width

would have been 0.8m, but it is uncertain as yet whether the wall extended over to the inner line of stones or whether these demarcate a benched area inside. However, on the exterior of the herringbone wall we found evidence of a strengur course of similar width which had been ramped up against it and this may have given the necessary support and thickness to the structure.

The relationship of this wall to other deposits in the area was not fully investigated this season, although as we have mentioned, the charcoal layer [0106] (partially equivalent to [0004]/C4) did not continue beneath it. We did however uncover additional activity beneath this layer in the form of a thin aeolian deposit [0123], relatively sterile but with very occasional charcoal flecks/fragments suggestive of human activity. This is the loess typically found directly over the Landnam tephra, although it is not completely continuous as it tended to feather out by the edges of the Skáli wall and became thicker southward. Sealed *beneath* this but still over the Landnam tephra was a discontinuous deposit of upcast [0122] with heavy Hekla 3 tephra inclusions which had been dumped into hollows to the southwest of the Skáli in the uneven ground immediately after the deposition on the Landnam tephra. This appears to represent a part of the very earliest activity on the site and is probably the result of construction upcast from either the Skáli or the sunken-floored building in Area G. It continues toward Area G and its relationship to the wall collapse of G will be critical; it also continues alongside the southwestern side of the Skáli and its relationship to contexts here also need further investigation.

Concluding Discussion

The aims of the 1998 season have been more than adequately answered - we found the 'missing' southern wall and three, possibly four new structures besides. However, a whole new set of questions have been opened up by this investigation, not least that the original intepretation of the building sequence proposed in 1995 has to be revised. We need to ask again what is the relationship of the Skáli to the sunken-floored building in Area G and what is the relation of these to the new structures revealed? How coherent is layer [0004] as a single context, especially as we move between Areas G and D? In concluding, I would like to address two main themes - one, looking back to Bruun and to try and understand why he excavated and interpreted the southern end as he did, the other looking forward to objectives for a follow-up season in terms of the questions raised here which need answering.

Bruun's claim for the insubstantial nature of the southern wall is primarily a result of him having removed most of it before actually seeing it; even so, its surviving dimensions are comparable to those observed elsewhere in Areas D and E in the current investigations which makes it hard to square his observation of this part of the structure compared to others. His interpretation in this context may be more a result of his prejudices prior to excavation where from the surface it appears as if the southern end has no wall compared to the eastern and western walls, an observation also made by Brynjúlfur Jónsson in 1900. The irony is, the more substantial long walls of the Skáli as they appear on the surface are in fact not really the walls at all but cumulative collapse and build up on the outside from other structures. The highest part of the eastern 'wall' as seen on the surface for example sits over Structure A2 - the actual Skáli east wall lies much further west. The fact that Bruun *could* recognize a wall when he saw it makes it hard to understand why he should have cut so much into them; at least two possibilities raise themselves, either or both of which may be partly true. In the first instance, by starting from the presumed top

and working down as he appears to have done, he started too far out and inconstant supervision of the workmen would have easily resulted in removal of the walls. It is also possible however that the walls had severely decayed and collapsed and they were unrecognizable until cut back some way.

Whatever Bruun's perception of the site, we are also re-interpreting our own excavations as the example of the 1995 trench shows. This will, and should, be an ongoing process and says something about the complexity of Hofstaðir and the richness of its archaeology. We have questioned the reliability of the "C4" marker horizon as a site-wide tool, but regardless of that, it does not appear to be useful anymore in assessing the relationship between the Skáli A/B and Structure G since both pre-date it. However, we have found another potential deposit to link these two structures, the upcast [0122], and one aim for the next season when excavating the collapse from Structure G would be to link up Areas A and G to follow this deposit. The new structures to the east of the Skáli revealed this year also clearly need further investigation and this will involve expanding Area A to the south and north as well as a little to the east to uncover their full plans. Beyond this, work would continue on excavating all deposits down to the beginning of the sequence within the open area in the expectation of completing the picture already emerging from this season.

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Context	Description
0100	Stone footing of Structure A1
0101	Redeposited blocks of turf (not structural), cut from elsewhere and dumped in a hollow in the northeastern corner of the area
0102	1995 excavation trench backfill
0103	1995 excavation trench ("R")
0104	Bruun's 1908 excavation trench
0105	Turf wall which has been truncated, (Structure A1)
0106	Very thin layer, thickens to east and west; either deliberate or naturally formed, heavy incorporation (e.g. midden outwash) of cultural material into a silt accumulation. Part of infamous "C4" layer.
0107	Abuts wall [0105] - part of robbed structure [0100]? Includes some finds from silo backfill [0115].
0108	silo pit cut with beam/stone slots at the base for internal partition/containment.
0109	Mixture of windblown loess and fine organics - long-term accumulation of natural aeolian soil and either weathered midden material or deliberate incorporation of midden (fertilizer). Possibly less rapid deposition to the cleaner loess [0016].
0110	Foundation cut for wall [0100]
0111	Mixed upcast dump - limits uncertain as it appears to lens under and over turf debris [0114]. Incompletely excavated in 1998.
0112	Turf collapse/decay from southern end of the skáli (Structure A/B) wall - eastern extent uncertain and unexcavated in 1998.
0113	Arbitrary cleaning unit over the northeast part of the area - probably the interface between [0109] and various turf debris below
0114	Turf debris/collapse - limits not fully defined in 1998 or excavated. Interdigitates with [0111] and [0124]
0115	Backfill of silo pit
0116	Main wall of skáli, southern end (Structure A/B). Severely truncated by Bruun along all edges leaving only a thin spine of the original herringbone wall upstanding.
0117	Basal fill of pit, not continous but filling voids and slots in the base of the silo pit [0108].
0118	collapsed turf, probably from wall [0125]
0119	collapsed turf - very distinct iron-rich oxidised turf fragments, unlike any of the walls visible in 1998 but its position and orientation suggests collapse from a structure to the north, i.e. [0125]
0120	mixed turf collapse and midden-type material, probably representing initial decay of structure/wall [0125]
0121	Very mixed material, settling in top of hollow over Structure A1, sealing all other layers associated with it.
0122	Upcast filling hollows/natural depressions over the Landnam layer in the southeast part of the area. Hollow appeared very regular and linear when exposed in plan but upon excavation proved to have avery irregular and undulating base and sides.
0123	Loess - windblown silt lying over the LNL which also levels out much of the uneveness of the previous surface. Inlcudes some cultural material in the form of charcoal suggestive of human activity in the vicinity
0124	Mixed upcast and midden-type material
0125	Turf wall of Structure A2
0126	Turf wall of Structure A3

Table 2.1. List of contexts from Area A

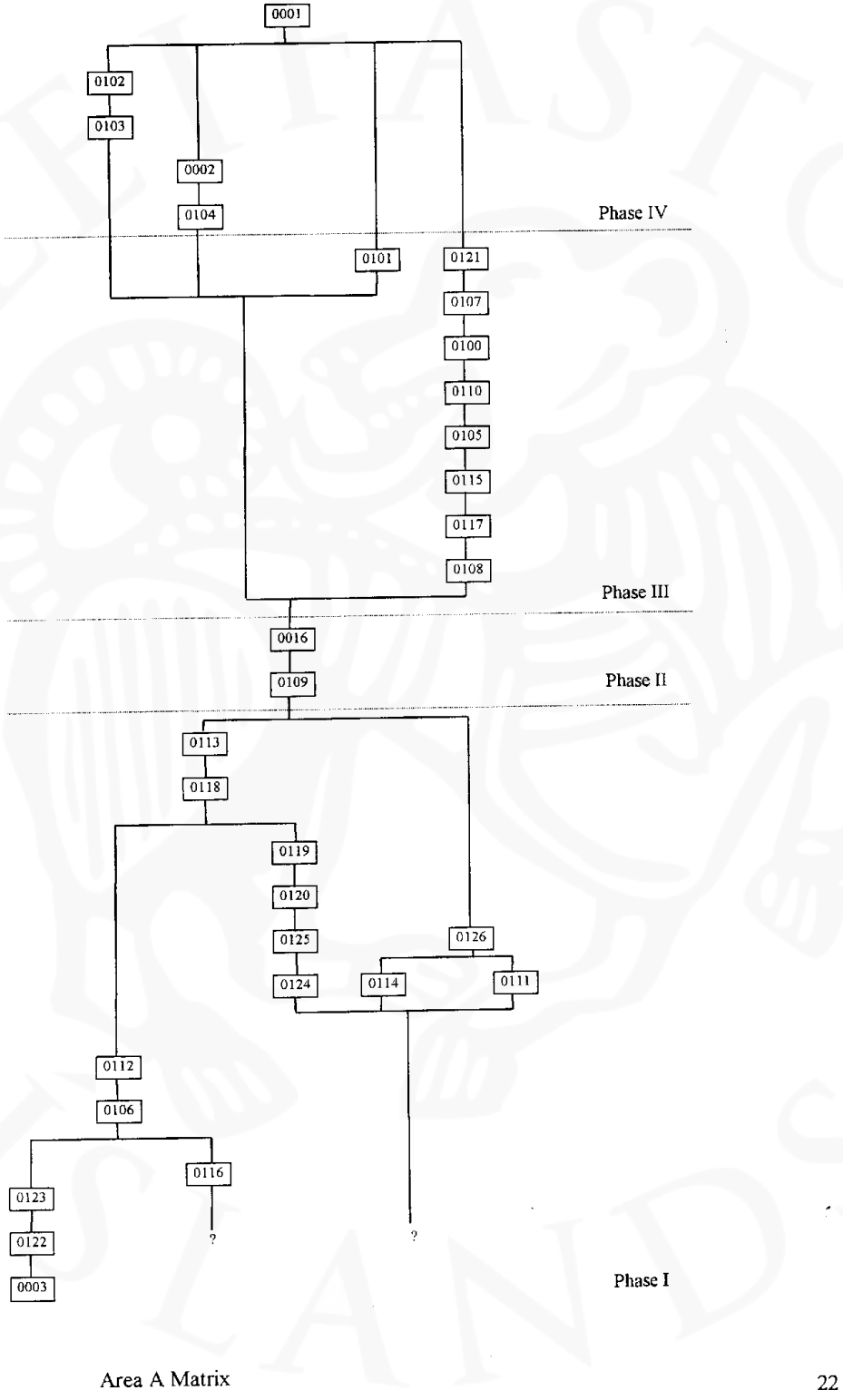

Figure 2.2 Area A Matrix

FORNLEIFASTOFNUN
ÍSLANDS

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3. 0 Area D Excavation Report

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Introduction

In 1998 excavations continued in the area designated "D" to the southwest of the main hall (A/B) at Hofstaðir. Area D was originally investigated by Daniel Bruun in 1908 but he did not come to a firm conclusion regarding the extent or function of the remains (Bruun & Jónsson 1909).

A new campaign of excavations in area D began in 1996. In this first season the main objective was to clear Bruun's trenches to enable a better understanding of his work in 1908. On the basis of findings in 1996 excavations were continued in 1997 with the aim to investigate structures called D1 and D2. D1 is an independent structure west of the skáli A/B and D2 is the area and structural remains connecting the skáli and D1. A new code, D3**,** will be introduced for the area between A/B and D1, north of D2. In 1997 the emphasis was on excavating fill, floor-layers and doorways within D1 which had not been previously disturbed by Bruun and this work was continued in 1998 focusing investigations in equal measure on the area immediately outside D1. The trench was extended to the north to expose all structural remains associated with D1, and to the east to expose a part of the western wall of A/B. This was done to facilitate better understanding of relationships between D1 and A/B and other structural remains in the area.

The same basic methodology was applied as before, single context planning continued from the plans and context records made during the 1997 excavation. Table 3.1 gives a full list of contexts uncovered while Figure 3.4 shows the stratigraphic matrix for the site. Samples were taken from selected contexts for a variety of analysis which will contribute to the understanding of the function and development of the excavated structures. The 1998 excavations in D added considerably to findings made in earlier seasons and revealed previously untouched archaeological deposits. This report presents the results of the 1998 excavations in area D. Four main phases have been identified in area D and they will be described in sequence, beginning with the most recent remains.

Excavation Results

Phase III (20th century)

Phase IV has been described in reports of the investigations in 1996 and 1997 (Adolf Friðriksson & Orri Vésteinsson 1996, 1997a) and very limited new excavation of these deposits was undertaken in area D in 1998. Therefore only a brief description of this phase is given here for better understanding of the 1998 work and of the overall relationship between deposits in the area. This phase consists of 20th century activity and to a large extent the remains of Daniel Bruun's excavation in 1908.

A layer of topsoil (001) has accumulated since the excavation of 1908 with traces of midden material deposited on the field as fertiliser within living memory. This layer is nowhere more than 10 cm thick.

After excavating the skáli (A/B) in 1908 Bruun turned his attention to the area on the southwestern side of the skáli (A/B). Bruun expected to find a room or an adjoining house but was not satisfied with the results and only gives the briefest of mentions of this part of the building complex in his reports. On his published drawing of the site he shows a rectangular trench with limited archaeological remains, but on his field sketch he drew a line indicating the area of D1 which he excavated.

The extent of area D trench in 1998 included Bruun's trenching (059, 060) of the skáli (A/B) on the eastern side of the western wall of that structure. In the exposed area it is apparent that Bruun aimed to put his trenches on the top of the turf-walls (015) and then followed the turf

on the inside, truncating the walls to an unknown degree. In an effort to locate a doorway on the western side of the skáli (A/B) Bruun cut a trench through the skáli wall and into two parallel walls forming a passage connecting the skáli and D1. He seems to have managed to follow the southern wall (537) of the passage without cutting into it much but he does not seem to have understood the northern wall (536) which is truncated by Bruun's irregular trenching and badly damaged.

Bruun excavated a rectangular area inside structure D1, cutting into the western wall (24) but leaving a strip of turf-debris on the inside of the southern wall-like deposits (see below) as well as two rectangular chunks of turf-debris in the northern end of the structure. The edges of his trench were cut right down into the floor layers severing the relationship between the walls and the floor but leaving a part of the floorlayers in the middle. Bruun did not remove fills in the two doorways in the southern part of the structure but excavated a doorway on the middle of the eastern wall of D1. On the eastern side of this wall Bruun encountered thick turf-deposits which he was not able to understand, his confusion apparent from the irregular trenching (D3).

Phase II (c. 1100-1908)

Preceeding Bruun's excavation was a long period of inactivity in area D. Layer 016 represents aeolian and humic accumulation with bands of tephra from the abandonment of the structures prior to 1104/1158 to their excavation in 1908. This context is clearly divided in two by the "a" tephra from AD 1477 which provided a useful marker horizon.

In the lowest part of layer 016 there is a thin and often indistinct band of tephra from either or both Hekla eruptions in 1104 and 1158. This tephra occurs just above the cultural layers and was frequently observed in plan just before the turf-walls of D1 and A/B appeared indicating that hardly any soil accumulation had occurred between the collapse of the walls and the deposition of the tephra. Outside the western wall of D1 a layer was identified underneath 016. This layer (070) was similar to 016 in texture but was lighter brown and included charcoal bits and patches of turf debris. This layer is interpreted as accumulation of earth against the walls of D1 after the structure had been abandoned. Traces of layer 70 could be identified on top of the western wall. Traces of a similar layer (061) were found in D3, abutting the eastern wall of D1. Layer 70 and 61 could not be connected.

Structure D1 was abandoned before 1104/1158. Thick layers of turf collapse were identified, both inside D1 and outside it, particularly in the area between D1 and A/B, now called D3. In 1997 two undisturbed contexts (021,043) representing turf collapse within D1 were recorded in the southern and northern end of the structure. Similar deposits were revealed in 1998 in D3. This turf collapse was right under layer 016**.** The 1104/1158 tephra layer could be identified right above the turf collapse. In D3 layers representing collpase of the western wall of the skáli and the eastern wall of D1 were identified (062, 063, 064). Layer 062 and 063 are turf debris, mixture of greenish and reddish turf. The reddish turf is clearer along the eastern wall of D1 but the greenish alongside the western wall of A/B. Layer 064 is very similar to 062 and 063 but it was harder and more compact. There is a possibility that 064 is a wall. Therefore it was recorded as a different context. Hardly any traces of turf collapse were identified on the outside of the northern and western sides of D1.

The difference between the collapse from the walls of the skáli (A/B) and D1 was very clear. The skáli wall was built with green-grey klömbruhnaus turf (015) but D1 with red-orange strengur turf (024). From the layers in D3 a number of animal bones were recovered, many of which were fragments of sheep and cattle skulls (see McGovern, this volume).

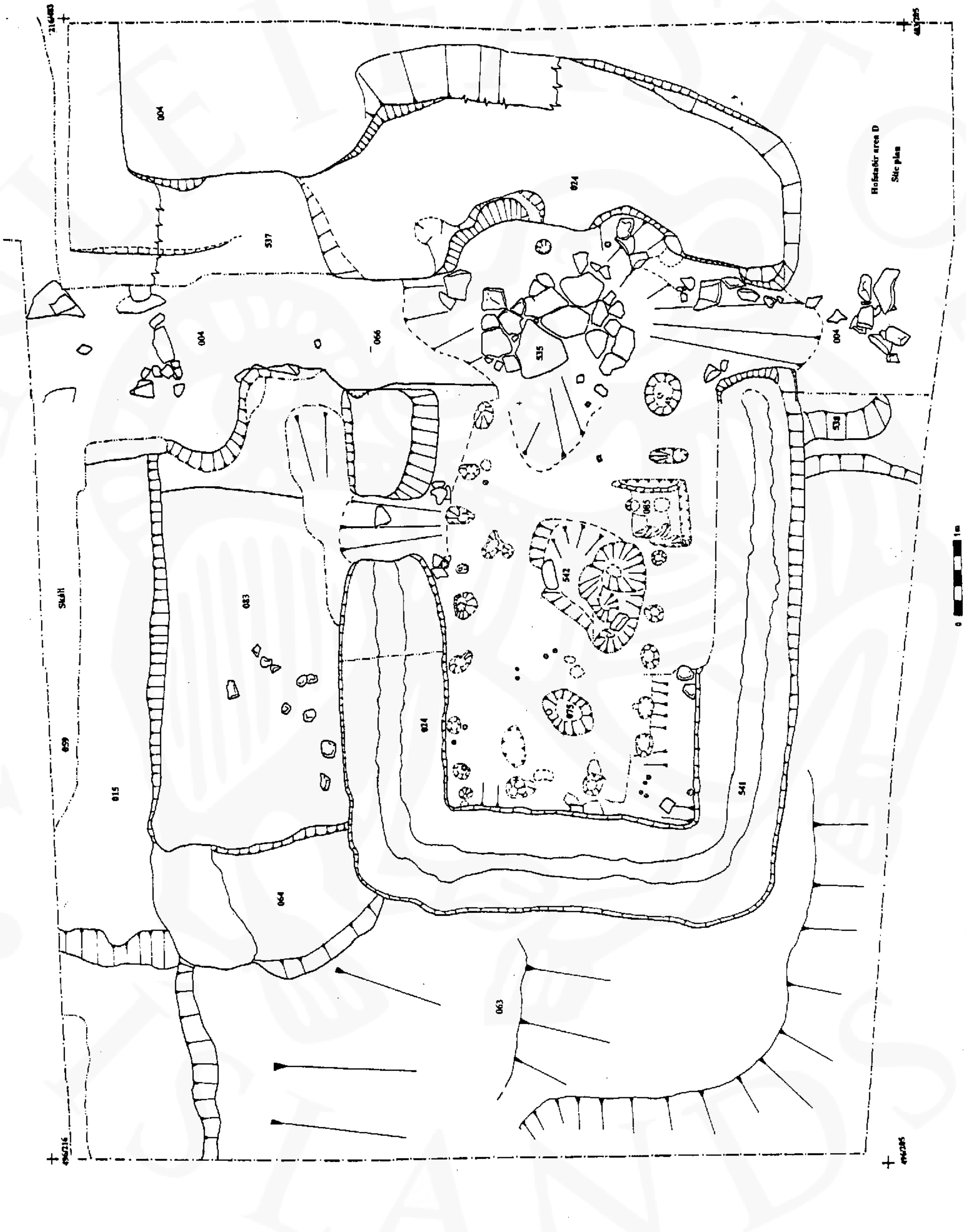
Phase I (9th – 11th century)

Phase Ib: The structural remains most clearly visible in area D, those which were abandoned at the same time as the skáli A/B, were all in use at the same time and are all ascribed to the same phase although some development of construction and layout can be discerned. Further investigations are needed to clarify the order in which the apparent structural changes were made but a tentative hypothesis can be put forward, dividing the phase into three sub-phases. First is the construction of a rectangular structure (D1) with a doorway on the southern side of its western wall, second is the filling of this doorway and the construction of a connecting passage between D1 and the skáli, and third is the partial dereliction of D1 and its usage for the storage of hay.

The turf walls of D1 are aligned north and south as the skáli measuring 8 x 3,20m on the inside but 11,20 x 6 m on the outside. On the west, east and north side are standing turf walls (024), measuring 120 cm wide and 80-100cm high. On the southern side a turf construction is lacking but in its stead there is a pile of mixed deposits, mainly turf depris but also ash and midden deposits, rising to a similar height as the other walls and which may at least have served a protective function (see below). The turf walls are made of red-orange strengur turf. The turf was laid down horizontally in two stacks on the inner and outer face of the wall and the space between was filled with loose earth (541). Layer 541 is 30 cm wide and 10 cm deep were it could be seen. The length of each strengur could not be identified as the strengur in the walls had fused together. The walls in D1 are different from the Skáli wall exposed along the east part of the trench in 1998, as well as in areas E and A. The Skáli wall is constructed with "klömbruhnaus" made of green-grey turf. The house had an entrance on the southwest side, excavated in 1997. A small wall (538) extends to the west on the northern side of the doorway, abutting the western wall of D1 and measuring 120 x 100 cm. A test trench was dug at this position in 1996 cutting this wall in half. This wall was built with similar turf as the other walls in D1 and seems to have been built as a weather shield at the entrance to the house.

On the inside of the turf walls the floor of the building had been cut into the subsoil (003). The depth of the cut could not be noted in most places as the 1908 excavation had disturbed the layers inside D1. However in the northern part of D1 the building had been cut from 15 – 20 cm into the subsoil. The 1997 excavation had already shown that undisturbed floorlayers inside D1 in its northern end were higher along the east and west walls than along the middle axis of the houses. This was taken to indicate that there might have been raised benches along the walls. Corresponding features could not be found elsewhere inside D1 because of truncation by the 1908 excavation.

Along the west and east walls of D1 postholes were identified, eight on each side (contexts 081, 088, 091, 097, 094, 099, 501, 503, 505, 507, 533, 525, 526, 527, 528, 529, 539, 531). Three more were found, two in the north end and one in the south**.** The depth of the postholes varied from 20 – 40 cm. The smallest posthole mesured 18 x 18 cm and the largest 25 x 24 cm. All these postholes were cut into the natural, and some had a stone which may have served as packing. The holes were regularly spaced, with an average interval of 25 to 60 cm. The postholes on both sides in the southern two thirds of D1 had been damaged by Bruun's trench removing layers to the extent that it was not possible to see from which surface the holes had originally been cut. The postholes in the northern third of the house, on the other hand, had not been damaged by earlier excavations. These postholes did not become visible until layer 051 had been removed and some of the postholes cut



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layer 052. Layers 051 and 052 had been recorded in 1997 and interpreded as hay layers. The fill in all the holes was similar, lightbrown earth with inclusions of H3 tephra (contexts 082, 089, 098, 093, 096, 500, 502, 504, 506, 508, 534, 510, 511, 513, 514, 516, 540, 530). Some of the postholes were associated with a smaller hole (090,092,095,512,515), located 4 - 10 cm in front of the main hole. These holes measured about 6 x 6 cm. The function of these smaller holes is not clear but they are clearly connected with the postholes in some way.

Inside D1 three fairly large depressions had been cut into the subsoil**.** The smaller and more irregular depression (075) was in the northern part of the structure, in the central aisle and this was sealed by the pinkish straw layer. This hole mesured 60 x 60 cm and about 10 - 15 cm deep. The larger depression (542) is in the middle of D1, measures 160 x 160 cm and is 10 – 15cm deep. Both these depressions were sealed by a pinkish straw layer, no other infill could be identified. The larger one can well have been a fireplace when the structure was in use. Both of these holes had probably been cleaned out before the structure was used as a hay storage. One fireburnt stone was identified in the larger one which might indicate its usage. The third depression (085) was identified towards the western wall and seems to have truncated one of the postholes. It was recorded in 1908 as a patch of charcoal and was revealed again 1996 but not excavated until 1998. Inside this depression there are oblong deep grooves along three sides (S, W and N), suggesting that vertical slabs have been removed from the sides. Between the grooves the bottom of the depression is uneven. It was filled with peat or turf-ash, mixed with charcoal and soil and included a number of fire-cracked rocks. There was however no scorching of the soil beneath the fill, indicating that fire had not burned on the ground in this location. This depression truncates one of the post holes and is therefore more recent than the timber structure, suggesting that the postholes represent an earlier phase of building in this location than the turf walls and floor layers. The function of the depressions is unclear but the larger one may be the remains of some sort of raised fire place where the fire burnt on a horizontal slab set upon three vertical ones.

A pavement (535) was discovered in the south end of D1 aligned with the entranceways on the east and west walls. The stones in this pavement are lava rocks, measuring from 60x60 cm to 20x20 cm. It is possible that Bruun's excavation removed stones nearer the western entrance. It was noted in 1997 that the western entrance had been sealed on purpose. It can be suggested that this was done at the same time as the passage D2 was constructed, but no stratigraphic relationship is available to prove this.

The working theory in 1997 was that Bruun had removed all floor layers in D1 except for the northern third of the house. There the remains of a floor layer (052) were discovered in 1997. The 1998 excavation showed that Bruun had cut the floor layers away alongside the walls but left them intact along the middle. The 1908 excavation had also cut floor layers away in the narrower trench which had been cut into the northern end of the house in its middle, seperating floor layers on each side of the house. Right along the middle of the structure dark brown compact layers 084/086 were discovered. Where these dark brown layers could be traced, they went straight up to the south wall and did not go under them. They could not be identified along the east and west walls because Bruuns excavations had removed them. Layers 084 and 086 are similar in texture to layer 052 which was excavated in 1997 and was interpreted as a floor layer. Layers 084 and 086 had been cut in the northern part of

D1 by Bruuns excavation and could not be linked with layers 052 but their apparance and texture suggest that they all belong to the same layer. These layers are organic and dark reddish brown. They are up to 9 cm thick. Thickest near the stone pavement (535) in the south end, thinning towards the north, east and the west until they disappear. Their extent is about 100cm x 120cm. In the northern part of D1 along the eastern wall a dark brown layer (509) which is probably as same as layer 052 was recorded. Embedded in this layer were timber remains which were set in a vertical slot between two of the postholes. A vertical beam in this place suggests that the house was a timber structure, with wood panelling filling the gaps between the posts. A comparable beam slot was however not found on the western side where layers had been left intact by previous excavators. Depending on the nature of layer 509 this may indicate that the panel-house was dismantled at some stage and replaced by a more conventional turf-house construction.

The construction of a passageway (D2) between D1 and the skáli (A/B) seems to represent a separate and later stage in the development of this building. The passage is aligned east west with turf walls on the north and south sides. The northern wall (536) is badly damaged by the 1908 excavation but the southern one (537) is nearly intact. Both passage walls are built in the same way as D1, with strengur turf. The walls in the passage are built of reddish turf while the skáli walls are of greenish klömbruhnaus turf.

The southern wall of the passage abuts the layers representing the southern gable of D1 suggesting that it is later than both skáli and D1, although this has yet to be confirmed. The skáli wall seems to have been cut and the remains of a repair, which may be associated with this action, are still visible on the northern face of the passage where the skáli wall has been truncated. The repair is a 20 cm thick slice of reddish-orange strengur turf like that in D1, stacked agains the grey-greenish klömbruhnaus turf in the skáli wall proper. Immediately west of this the northern wall of the passage has been truncated by the 1908 excavation, and another truncation is at the juncture of the passage wall and the eastern wall of D1, making the analysis of the relationship between the walls difficult. This will be possible with the removal of layers on the outside of the walls (in D3) at a future date. The relationship between the southern passage wall and the skáli wall is not yet clear either. Bruun's trench also cuts away all the layers inside the passage straight down to the underlying sheet midden 004. The 1908 trench stops short of the western wall in D1. There Bruun obviously thought that he had found the western wall of the structure in D. The 1997 excavation demonstrated that where Bruun thought that he had found a wall there was actually an infilled doorway, 1,40 x 120 cm. The fill (066) in this doorway was of the same sort as the turf debris 021 and 043 which had filled D1 suggesting that it was filled in at the same time as the rest of the building. Underneath the fill was a pinkish straw layer (077), similar to layer 051. This doorway seems to have been in use after the western entrance had been blocked although it cannot be precluded that they were both in use at the same time before the western one was filled in. The third doorway in D1 is on the middle of eastern wall and leads to the area (D3) between the skáli and D1. This doorway was excavated in 1908, removing all evidence of stratigraphic relationships. It is quite possible that the doorway leads to another room in area D3 but D3 has not been fully excavated at this point.

The last stage of occupation in area D was when the structure was used as a storage probably for hay. In 1997 a pinkish straw layer (051) was found in the northern part of D1. This layer was sealed by turf debris layer 043 and was on top of a more floorlike layer, 052. 051 was spread all over

the northern part of the structure and could not be found anywhere outside it. It was sampled and the examination showed a high proportion of decomposed grass (Simpson 1997).

During the excavation in 1998 similar straw layers were found elsewhere in D1. The last remains of layer 051 were removed and then it became evident that it sealed the postholes in the north of D1 and the single posthole in the southern end. Similar layers (051,074,079) sealed the depression (075) in the north end and the large depression (542) in the middle. The same layers also sealed the posthole in the south end and were on top of the pavement (074,079). It was not possible to see whether these straw layers had continued up against the eastern and western walls in the southern two thirds of the building because there the excavators in 1908 had cut right through to the subsoil. No straw layers were found in the passage D2 except beneath the fill in the eastern doorway. It is possible that the 1908 excavation had removed them. The fact that layer 051 sealed the postholes and other elements within D1 suggests that all the timber structures had been removed before its use for hay storage.

A section was cut in the middle of D1 along the north/south axis. This was done for micromorphological sampling carried out by Karen Milek. In this section two pinkish layers, 074 and 079, very similar to 051 were described and it was noted that they were separated by a thin layer of turf debris (078). Below these layers layers 084 and 086 were revealed, interpreted as floor layers.

Phase Ia: Beneath the turf constructions in D the sheet midden 004 (C4 in previous reports) can be seen in various places. No further indications of the nature and extent were revealed in 1998. The layer has been observed in several discontinuous locations; underneath the southern wall of the passage D2, under the western wall of D1 and in section in the northern side of the northern entrance on the eastern wall in D1. In that location turf-debris layers have been observed underneath this marker horizon. A similar layer has been observed in Area E, also underlying the principal structures there, E1 and E2, but its relationship with A/B is not yet clear, although evidence is mounting that the layer is more recent than at least parts of the skáli. This sheet midden and the deposits sealed by it represent a separate phase of occupation in area D, earlier and quite different from the structures D1 and D2. It is one of the tasks of the upcoming seasons of investigations in Hofstaðir to explain the nature of this remarkable deposit.

Conclusions

In 1998 the excavation of D1 on the inside was completed, apart from possible layers which may be capped by the pavement in the southern end of the structure, which was not removed. Surface layers associated with the passage D2 were also examined but the relationship between the structural elements of D1, D2 and A/B awaits clarification through examination on the outside, particularly in D3 and on the junction of D2 and A. The 1998 season also saw the last remains of Daniel Bruun's excavation explained and removed.

Bruun had realised that in the area he called D there was some sort of a structure but he failed to make anything of it. It can now be seen that his failure was in part due to the fact that he, inadvertently, removed a number of structural elements. This is clearly seen in the passage between the skáli and D1 and also inside D1, as well as on the inside of the western wall of the skáli itself.

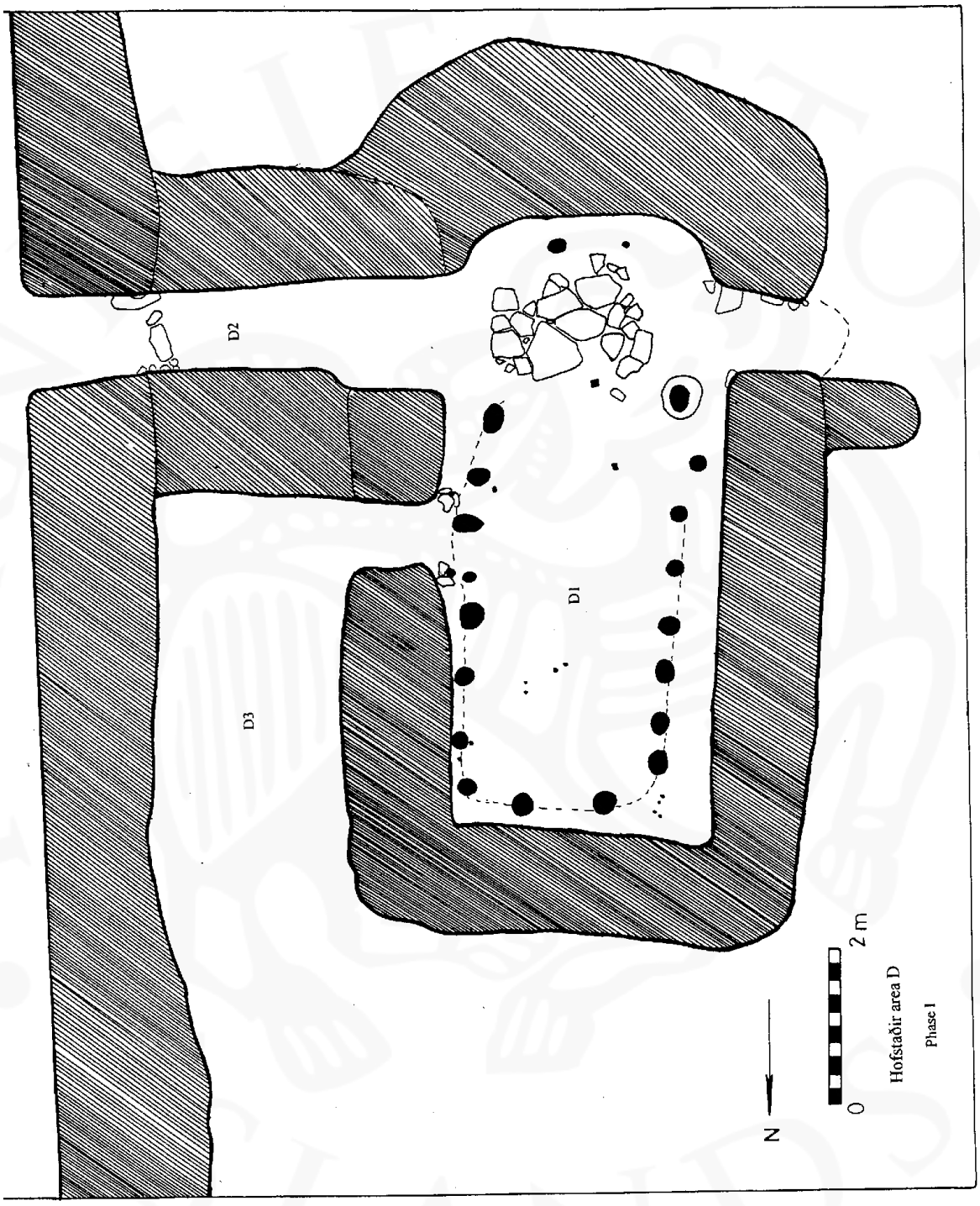
It is striking that Bruun saw neither the floor layers nor any other structural elements inside D1. Similar features have been observed both in areas E and A. This raises the question to what extent Bruun's

conclusions are based on observations during his excavation or whether they are more a result of his observations and preconceived ideas before he actually excavated. Area D was obviously excavated by Bruun from what he saw on the surface in 1908. This underlines the importance of reopening the skáli to revaluate the 1908 excavation results.

The relationship between the skáli A/B, D1 and D2 is now becoming clear. First a structure was constructed aligned with the skáli. This may originally have been a timber house with turf walls added later. At a later stage a passage was built connecting the skáli and D1. The excavations in area D have not yet been able to show that the skáli wall is necessarily earlier than all the structural remains in D1.

If indications which have appeared in 1998 that 004 is later than the skáli A/B as well as the midden fills in G, it suggests that at least the turf structure D1 must be later than the skáli. The complexity and variable composition of the deposit which has been called 004 and 1004 (in E) does however warn against making assumptions about its homogeneity and usefulness as a single chronological marker.

Excavation of D3 was not completed in 1998 but this part of the area may contain the key to the understanding of the relationship between the structural elements in D. The evidence indicates that D3 was an open area between the skáli and D1 but the doorway in the middle of the eastern wall of D1, and layer 064 which may be remains of a wall in D3. This indicates the possibility of another room in that area.



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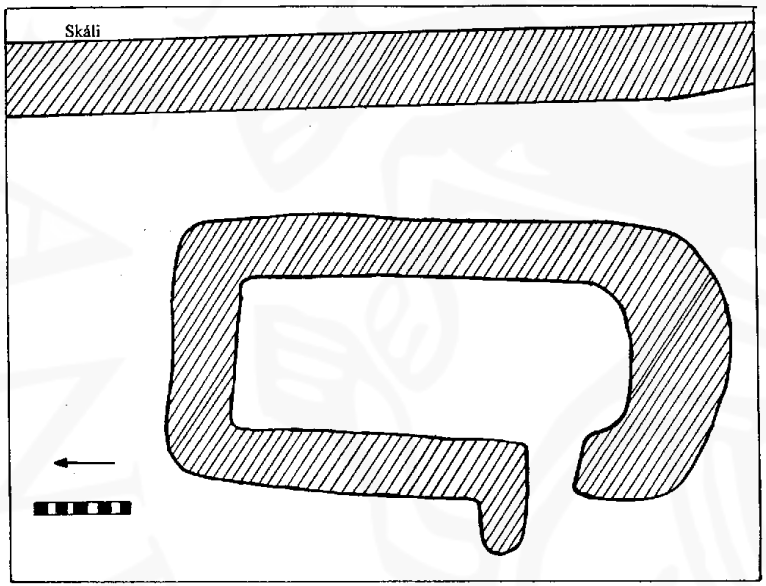
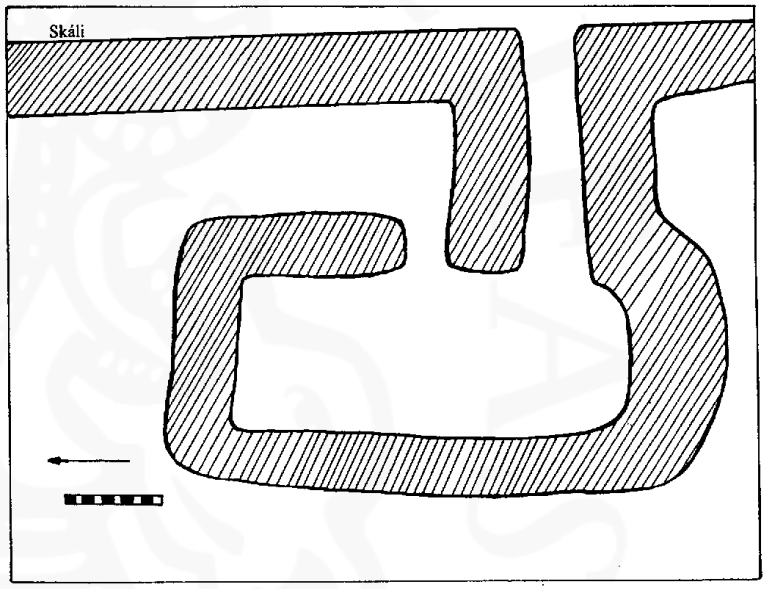


Sub-phase a



Sub-phase b

Hofstaðir area D

Phase I

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Context	Description
0016	Undistrubed over cultural layers.
0051	Straw layer in north end.
0055	Turf collapse in south gable wall.
0059	Bruuns cut in A/B wall.
0060	Fill in cut in A/B wall.
0061	Isolated layer in D3 (same as 16).
0062	Turf collapse in D3.
0063	Turf collapse in D3.
0064	Turf collapse in D3 but little differnt in texture from 62/63.
0065	Turf collapse in D1 (small patch).
0066	Fill in passage dorway.
0067	Turf collapse in bottom of Bruuns trench in D1.
0068	Pinkish layer (Piet) outside north wall in D1.
0069	Turf collapse in D1, bottom of DB trench.
0070	Accumulation against western wall (under 16).
0071	Collapse from A/B wall (green turf).
0072	Turf collapse in D1.
0073	Single block of stratified material.
0074	Organic/pinkish layer. Straw layer. (same as 51)
0075	Cut. A hole in north end of D1.
0076	Fill in charcoal pit in D1.
0077	Straw layer in eastern doorway.
0078	Turf layer between hay layers in D1.
0079	Straw layer pinkish (under 78).
0080	Layer (over postholes).
0081	Posthole cut in north end of D1.
0082	Posthole fill .
0083	Turf collapse between longhouse and D3.
0084	Dark redish/brown layer. Floor in D1.
0085	Cut in charcoal pit in D1.
0086	Dark brown layer (under 84) Floor in D1.
0087	Cut for fill 82. Posthole.
0088	Cut for posthole in D1. North end.
0089	Posthole fill.
0090	Cut. Support pole for a post.
0091	Cut. Posthole.
0092	Small hole beside the posthole.
0093	Fill in posthole.
0094	Posthole cut.
0095	Small hole beside posthole.
0096	Fill in posthole.
0097	Posthole cut.
0098	Posthole fill.
0099	Posthole cut.
0500	Posthole fill.
0501	Posthole cut.
0502	Posthole fill.
0503	Posthole cut.
0504	Posthole fill.
0505	Posthole cut.
0506	Posthole fill.
0507	Posthole cut.
0508	Posthole fill.

0509	Dark brown layer. Wood paneling.
0510	Posthole fill.
0511	Posthole fill.
0512	Fill in a small hole.
0513	Posthole fill.
0514	Posthole fill.
0515	Fill in a small hole.
0516	Posthole fill.
0517	Fill.
0518	Fill.
0519	Fill.
0520	Fill.
0521	Fill.
0522	Fill.
0523	Fill.
0524	Fill.
0525	Posthole cut (510).
0526	Posthole cut (511).
0527	Posthole cut (513).
0528	Posthole cut (514).
0529	Posthole cut (516).
0530	Posthole fill.
0531	Posthole cut.
0532	Posthole.
0533	Posthole cut.
0534	Posthole fill.
0535	Pavement in D1.
0536	North wall in passage.
0537	South wall in passage.
0538	Wall in western entrance (bíslag).
0539	Posthole cut (south D1).
0540	Posthole fill.
0541	Fill in turf wall (24).
0542	Cut in large hole (fireplace)

Table 3-1. List of contexts from Area D

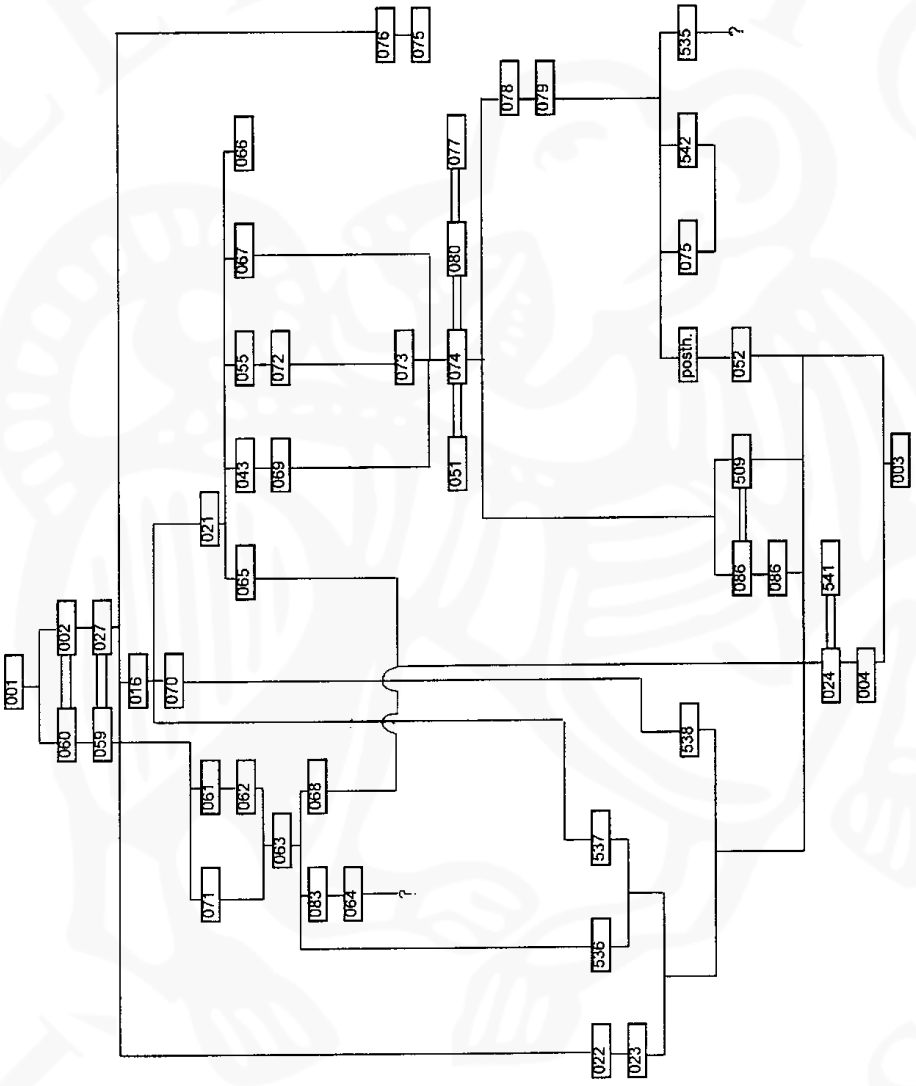

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Figure 3-4. Area D Matrix.


FORNLEIFASTOFNUN
ÍSLANDS

Howell Roberts

4.0 Area E Excavation Report

Introduction

Investigations in Area E focused on the remains of two small structures (E1 and E2) partially uncovered during excavation in 1997. Continuation of that work has clarified the nature and extent of Structures E1 and E2, and also the relationships between Structures E1, E2 and Skáli A/B. Excavation facilitated the recovery of numerous environmental samples and a large quantity of faunal remains, and these will contribute towards a broader understanding of the role of Area E within the Hofstaðir complex.

Stratigraphic excavation demonstrated that Structure E1 must have been built later than both the Skáli A/B and Structure E2. Structures E1 and E2 can both been shown to be later than a widespread refuse horizon identified at many locations across the site. Within Area E, this refuse horizon appears to respect the upstanding remains of Skáli A/B and is apparently later than the construction of Skáli A/B.

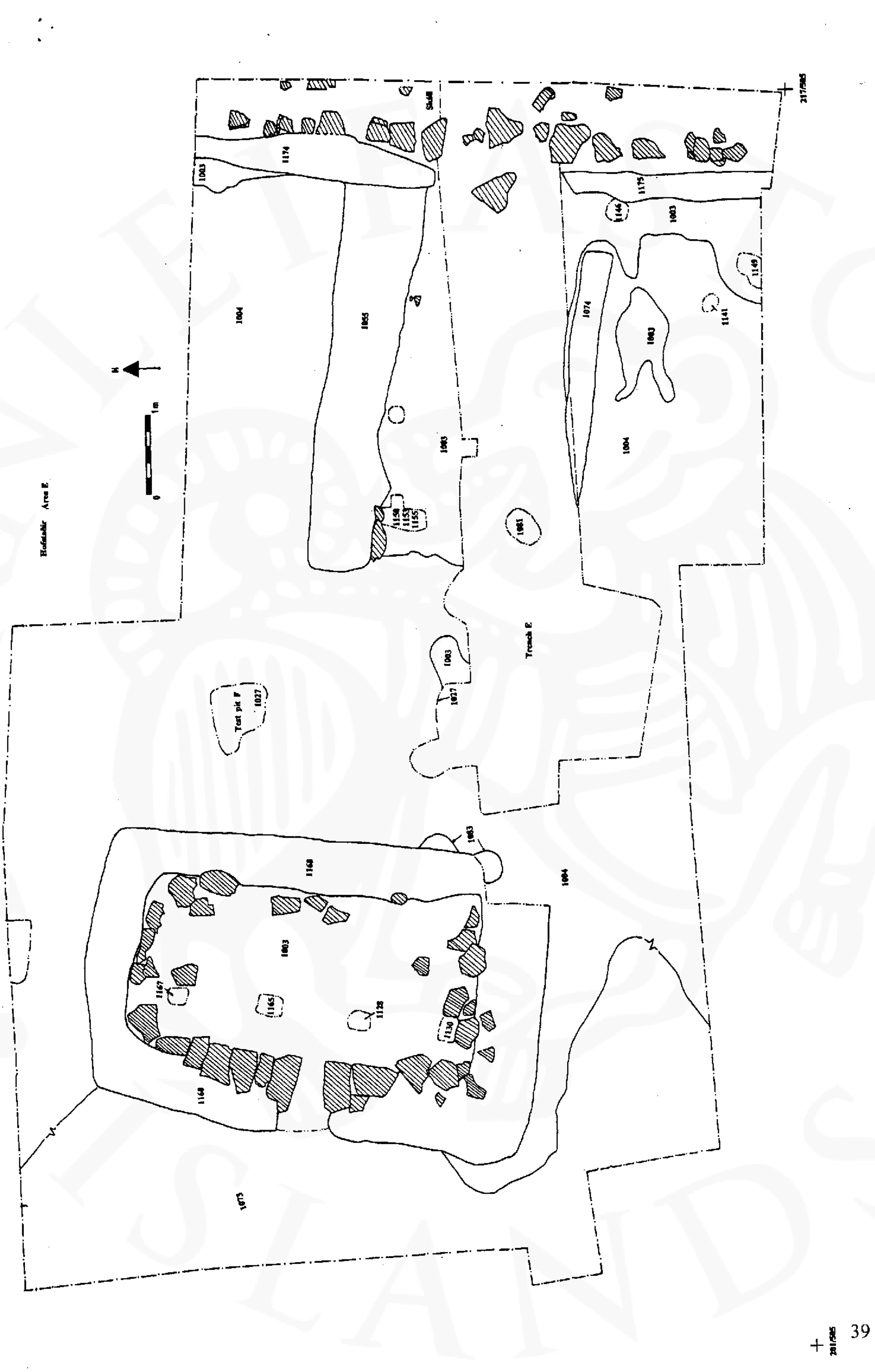
The Skáli A/B is the earliest construction within Area E, and Structure E1 is the latest. All structural remains within Area E can be shown to belong to a phase of occupation at Hofstaðir that can be dated to the 9 - 11th centuries by the relationship of these remains to known tephrochronological horizons. Of the remaining layers, context 1016 represents a period of aeolian deposition from 1104 AD up to 1477 AD, and context 1001 represents the continued deposition of soils from 1477 AD up to the modern period. Contexts 1002 and 1027 represent Daniel Bruun's excavation in 1908.

In 1998 Area E was slightly enlarged both to the south and east of the previous limits of excavation in order to address outstanding questions about the nature of Structure E1, and its relationship to the remains of Skáli A/B. Excavation in Structure E2 proceeded in opposing quadrants in order to facilitate the recovery of micromorphological samples from the entire extent of this structure. Single context recording was continued from the plans and context records made during the 1997 excavation. Further investigation of those contexts unexcavated in 1997 has allowed the development and re-evaluation of evidence gathered in 1997.
Table 4-1 lists all contexts recorded in Area E in 1997 and 1998, and a stratigraphic matrix (Figure 4-4) illustrates the relationships between those contexts.
Excavation in Area E was conducted by students of The Field school in Icelandic Archaeology, closely supervised and instructed by the author. Excavation by quadrant within Structure E2 was carried out by the author and Karen Milek (University of Cambridge) who was responsible for micromorphological sampling within Area E.

Results

Structure E1

Removal of all backfill, trample and modern material from Trench E, opened by Daniel Bruun in 1908, and re-opened in 1992, revealed some small remnants of surviving archaeology at the base of the trench, within Structure E1 (fig. 4-2). Careful study of the sections of Trench E during 1997 revealed the presence of a sequence of fine internal deposits, beneath several layers of mixed turf debris. Although heavily truncated by Trench E, these internal deposits could be seen to form similar sequences of deposition to the north and south of Trench E. The most complex of these sequences was to be seen to the north of Trench E, where truncation had been least severe.



Trench E
Test pit F
Skull
1m
N
39

Excavation in 1998 commenced with the removal of a block of turf (context 1048) which could be shown to lie over the uppermost of the fine internal deposits (context 1030). Context 1048 was composed of yellow/grey/green turf *strengur*, and is interpreted as an episode of structural collapse. At the base of Trench E the truncated remains of a possible floor layer were located (contexts 1079 and 1080). Context 1079 was a mixed pinkish brown silt located at the centre of Structure E1, and exhibited signs of compaction. The lower limit of context 1079 was formed by a lens of paler pink material with a fibrous/organic component, sitting over natural deposits. Context 1080 was located to the west of context 1079 and appeared somewhat darker in colour. The compaction of context 1080 was highly variable, and this layer was found to contain occasional flecks of white H-3 tephra along with charcoal, peat and turf fragments. The removal of context 1080 revealed a small irregular linear depression (context [1081]) believed to be consistent with the removal of a post or post-pad.

Context 1030, a mid grey brown sandy silt, had been largely exposed by excavation in 1997. Upon excavation, it was seen to include occasional small rounded stones, occasional charcoal, and fragments of bone. Removal of context 1030 revealed a discrete deposit of soot and soil (context 1096) located towards the centre of Structure E1. Context 1096 was largely black in colour and measured *c.* 0.80m east/west, 0.35m north/south and up to 65mm in depth. The latter context was semi-circular in shape, as it had been truncated by Trench E. Context 1096 included several fine lenses of yellow brown silt, and therefore is believed to have accumulated over some period of time, and is unlikely to represent a single episode of deposition. Soil samples were recovered from this context for further analysis. Context 1093, a small patch of turf debris towards the west of the structure, was found to be beneath both contexts 1030 and 1088. Context 1088 was a similar small patch of turf debris, situated over context 1093, but separated from it by elements of context 1030. The removal of these latter contexts exposed a soft pale pinkish brown deposit (context 1097) with a fibrous component. Context 1097 was situated in the central northern portion of Structure E1, and measured 2.09m east/west x 0.71m north/south with a maximum depth of 15mm, being thickest at its truncation by Trench E. Context 1097 overlay above a similar pinkish brown deposit (context 1100) extending further to the west. Context 1100 measured 1.78m east/west x 0.67m north/south with a maximum depth of 55mm, and was seen to be somewhat darker and more mixed than context 1097, containing charcoal, occasional small turf fragments, and fine lenses of green grey silt at its upper horizon. Beneath context 1100 was another thin deposit (context 1106) of a very similar nature. Context 1106 extended over a somewhat larger area within Structure E1 filling most of its northern portion and measuring 4.42m east/west x 0.95m north/south with a maximum depth of 30mm. Context 1106 was distinguished from context 1100 by the presence of fine discontinuous lenses of green grey silt at the upper horizon of context 1106. Sealed by context 1106 was a thin mixed deposit of dark greyish brown sandy silt (context 1109), found to include occasional small fragments of turf, some charcoal, bone and occasional small lenses of material very similar to the overlying deposits 1093, 1097, 1100, and 1106. Context 1109 measured 4.92m east/west x 0.91m north/south with a depth typically of *c.* 25mm, but thickening to a depth of up to 80mm at its western limit. Removal of this layer revealed a variety of underlying deposits. At the west of Structure E1 was a patch of mixed reddish turf debris (context 1132) overlying a yellowish brown silt layer (context 1133). Both latter deposits lay up against the internal face of the northern wall of Structure E1. In the central

Hofstaðir Area E
Structure E1 Skáli A/B
Skáli
1003
1174
1180
1178
1176
1177
1004
1055
1118
1171
1169
1162
1159
1150
1153
1155
1081
1027
Ash/charcoal
Test pit F
Trench E
1126
1146
1122
1143
1141
1149
1175

41

northern portion context 1109 sealed a very pale pinkish brown thin layer (context 1113) contained within a shallow depression at the centre of Structure E1. Context 1113 contained occasional small patches of yellow green turf debris and a few tiny fragments of calcined bone. East of context 1113 was a small patch of a similar but separate deposit (context 1115). Context 1115 extended towards the eastern limit of Structure E1. At the junction of the latter structure and Skáli A/B context 1109 lay over a small truncated patch of grey sandy silt (context 1180). Context 1180 may extend into the internal area of Skáli A/B, and has been left unexcavated at this time. The removal of layers 1113 and 1115 exposed the remains of a number of small internal post holes that may represent an earlier period of use within Structure E1.

Located at the internal edge of the northern wall of Structure E1 were two very small post holes (features [1169] and [1171]), along with a single larger post hole (feature [1162]). Feature 1169 measured 75mm in diameter and 115mm in depth and was filled by a soft mixed brown silt (context 1168) with traces of reddish organic material. Feature [1171] measured 65-80mm in diameter and 100mm in depth, and was filled by a yellow brown silt (context 1170). The latter features were separated by a distance of *c.* 0.20m. Feature 1162 was situated *c.* 0.11m to the west of feature 1169, and *c.* 1.90m from the western limit of Structure E1. Feature 1162 measured 195mm in diameter with a depth of up to 0.25m, and was filled by a mixed grey brown sandy silt (context 1161). Both the cut and fill of feature 1162 exhibited indications of a post pipe. The central portion of context 1161 was found to be loose and soft, and upon excavation the base of feature 1162 was stepped, being 80mm deeper at the centre.

A further small post hole (feature [1159]) was located towards the centre line of Structure E1, *c.* 1.10m from the western limit of that structure. Feature 1159 measured 90-100mm in diameter by 0.22m in depth, and was filled by a yellow brown sandy silt (context 1158). A shallow sub-square post hole (feature [1118]) was located 1.65m from the eastern limit of Structure E1, 0.45m south of the northern wall. Feature 1118 measured up to 0.22m east/west and 80mm in depth, but had been truncated at its southern edge by Trench E. Feature 1118 was filled by a mixed grey brown silt (context 1117), including occasional small lenses of pinkish brown silt.

To the south of Trench E, a similar sequence of deposits and features were observed. Context 1075, a mid grey brown sandy silt (very similar to context 1030) had been exposed by excavation in 1997, following the removal of layers of turf debris (contexts 1049 and 1051). Further investigation at the eastern end of the southern wall of Structure E1 showed context 1051 to be filling and extending beyond an opening between that wall and the western wall of Skáli A/B. To the south of Structure E1, context 1051 was overlain by a series of deposits of grey green turf debris (contexts 1045, 1050 and 1054 excavated in 1997, and contexts 1108, 1110 and 1114 excavated in 1998).

Context 1075 measured 2.52m east/west by 0.58m north/south, with a maximum depth of 40mm, and was found to contain fragments of turf. Beneath context 1075 was a pale pinkish brown silt with an organic content (context 1094), very similar to those seen north of Trench E. Context 1094 measured 0.92m east/west, 0.34m north/south and between 2-10mm in thickness, and was sampled for further analysis. Context 1094 lay above a dark greenish brown sandy silt (context 1119) very similar to that seen north of Trench E

(context 1109). Context 1119 measured 2.34m east/west, 0.34m north/south with a depth of up to 20mm, and sealed a posthole and a possible post setting (features [1126] and [1122]). Feature 1122 measured 0.17m north/south and 0.15m east/west with a depth of up to 40mm, but was angular in shape and may be the void left by a removed stone serving as a post-pad. Feature 1122 was filled by yellow/grey brown silt (context 1121). Feature 1126 measured 90-100mm in diameter, 80mm in depth, and was partially filled by mid yellow silt (context 1125). The southern limit of context 1119 was seen to lie up against the southern wall of Structure E1 (context 1074), and also over the northernmost elements of context 1123.

Context 1123 was located both south of Structure E1 and within the opening in its southern wall, measuring up to 2.25m north/south and 1.45m east/west with a depth of up to 40mm. Context 1123 was composed of mixed yellow brown, with occasional fragments of turf, and was found to contain substantial quantities of charcoal and both mammalian and fish bone. Context 1123 was 100% sampled for wet sieving to maximise the recovery of faunal remains. The removal of context 1123 exposed an extensive deposit of turf debris (context 1138) and two post holes (features [1149] and [1141]), external to Structure E1. Feature 1141 was an oval post hole located 1.30m south of Structure E1 and 1.30m west of Skáli A/B. Feature 1141 measured 0.225m in length, 0.165m in width, up to 0.20m in depth, and was filled by context 1140. Context 1140 was a variable yellow/green/grey brown silt with an organic content. Removal of context 1140 revealed traces of a post pipe at the base of feature 1141, measuring 80-100mm in diameter. Feature 1149 was located 0.90m west of Skáli A/B, at the southern limit of excavation. The latter feature was half sectioned, as it partially extends beyond the limit of excavation. Feature 1149 measured 0.30m in diameter and 0.49 in depth. An angular sub-square depression extended up to 0.21m northeast from the eastern edge of the posthole, consistent with the removal of a packing stone. Additionally, seven angular rocks up to 50mm in length were recovered from the mixed yellow brown silt fill (context 1148) of feature 1149.

Context 1138 was located west of Skáli A/B and south of Structure E1, partially filling the opening between those structures. Context 1138 was composed of mixed yellow/red brown turf debris containing occasional bone and charcoal fragments, and measured up to 2.18m north/ south (to the limit of excavation), 1.87m east/west, with a maximum thickness of 80mm. Removal of the latter context revealed two further post holes (features [1143] and [1146]). Feature 1143 was located 0.30m south of Structure E1 and 1.10m west of Skáli A/B, measuring 0.26m in length, 0.17m in width and 90mm in depth. Feature 1143 was ovoid in shape and filled by a mixed brown silt (context 1142) containing charcoal fragments. Feature 1146 slightly truncates the western wall of Skáli A/B, along the line of the southern wall of Structure E1.

Feature 1146 measured 0.26-0.28m in diameter with a depth of up to 0.48m. The fill of feature 1146 was a dark yellow brown silt (context 1145) found to contain post packing composed of 16 angular stones measuring 40-150mm in length. At the base of feature 1146, a small horizontal linear feature was noted extending eastwards, and is currently interpreted as evidence of rodent action.

To the west of the above features, the removal of turf debris layer 1114 exposed a deposit of more compacted yellow brown turf debris (context 1136). Context 1136 was located alongside the southern wall of Structure E1, measuring up to 2.38m in length, 1.97m in width and a maximum of 50mm in thickness. To the southwest of

Structure E1 and southeast of Structure E2, removal of turf debris layer 1054 exposed a series of deposits rich in ash and charcoal (contexts 1091, 1095, 1099 and 1105). Context 1091 was located at the southern edge of Trench E, and measured 1.10m north/south, 0.60m east/west and was up to 25mm thick. Context 1091 was composed of pale grey ash and silt, and contained frequent small fragments of charcoal and burnt bone. The latter context may represent a single discrete episode of dumping. Beneath and west of context 1091 was a more mixed and extensive deposit of grey brown / yellow brown silt (context 1095) also found to contain quantities of burnt bone and charcoal. Context 1095 measured 4.35m in length, 1.55m in width and *c.* 30mm in thickness, and was seen to extend beyond the southern limit of excavation. Beneath and west of context 1099, and extending south of Structure E2, was a discontinuous layer of yellow brown turf (context 1099), found to contain three stones showing evidence of heating. Context 1099 measured up to 5.60m in east /west, 2.10m north/south and was up to 45mm thick. The latter context also extends beyond the southern limit of excavation. Removal of context 1099 exposed a further discrete dumping episode (context 1105), truncated by Trench E. Context 1105 was composed of yellowish brown silt, and was seen to contain a relatively high concentration of bone, along with charcoal and occasional fire cracked stone fragments. Context 1105 may be equivalent to a similar layer (context 1144) recorded north of Trench E.

The removal of the above layers south of Trench E exposed a widespread deposit of mid to dark grey ash and silt containing charcoal and burnt bone (context 1004). Context 1004 was seen to continue to the west and north of Trench E, and extends across the larger part of Area E (see figure 4-1). Context 1004 was seen to extend beneath the southern wall of Structure E1 (context 1074).

The long walls of Structure E1 are formed by contexts 1074 and context 1055. Context 1074 forms the southern wall, and has been significantly truncated by Trench E at its northern edge and at its western limit. The remaining portion of context 1074 measures 3.28m in length, 0.38m in width and has an extant height of 0.35m. Context 1074 is composed of yellow brown / grey green turf strengur containing Landnáms sequence tephra, each turf having a thickness not greater than 50mm. At its lower internal edge, the removal of internal layers from the face of context 1074 revealed two shallow vertical indentations, *c.* 0.80m apart towards the centre of context 1074. Both indentations are approximately 40mm in width, and visible for a height of between 0.11- 0.16m. Context 1074 terminates between 0.66 and 0.74m west of the western wall of Skáli A/B (context 1175). The northern wall of Structure E1 (context 1055) is also formed from layers of yellow brown / grey green turf strengur containing Landnáms sequence tephra. Context 1055 measures up to 4.96m in length, 1.02m in width, and survives to a height of up to 0.41m. Context 1055 also exhibited a small vertical identation at its inner edge, approximately 1.60m from its eastern limit. Additionally, context 1055 incorporated two horizontal flat stones lying within its internal face, close to the western limit of the wall. These stones are likely to be associated with three post settings identified at this location (below). No remains of a turf end wall were found at the western limit of Structure E1. Several primarily external deposits extended into the area immediately south of the western limit of context 1055, and sealing three intercutting sub-square postholes (features [1150], [1155] and [1153]) and a compacted deposit (context 1152). Feature 1150 measured 0.32m north/south, 0.25m east/west, with a maximum depth at its southeast corner of 0.22m, and is located *c.* 0.40m south of context 1055, and 0.60m within the western limit of that wall.

Feature 1150 was filled a dark greyish brown silt (context 1151) including fragments of turf debris. Feature 1153 was located at the northern edge of feature 1150, and had been truncated by it. Feature 1153 measured 0.20m east/west,0.24m north/south, with a depth of up to 0.15m, and was filled by a dark brown sandy silt (context 1154). The northern limit of feature 1153 was seen to extend a small distance beneath the southern limit of context 1055. This is seen as being due to the spreading and settling of the the turf wall (context 1055). The tendency of turf walls to deform under loading (and over time) has been frequently noted during the excavation of icelandic turf built structures. Feature 1153 had also been truncated at its eastern edge by feature 1155. Feature 1155 measured 0.18m x 0.18m, with a depth of up to 0.10m, being deepest at its western edge. The latter feature was filled by a dark brown silt (context 1157). Context 1152 was located to the south of the above post holes, extending south to Trench E. Context 1152 was a dark greyish brown sandy silt loam, measuring 0.36m north south, by 0.18m east/west and *c.* 10mm in thickness. Context 1152 exhibited a platy structure, and included frequent small fragments of charcoal. Both the nature and location of deposit 1152 are consistent with its interpretation as a trampled threshold. Micromorphological and bulk samples were recovered from context 1152, and will hopefully support this hypothesis. Context 1152 was seen to seal a deposit of the Landnáms tephra sequence, (context 1181) similarly compacted. A possible threshold, the accompanying postholes, and the absence of a turf wall are taken to suggest a timber gable and entrance at the western end of Structure E1.

External Deposits

To the north and west of Structure E1, a series of external deposits had been revealed by excavation in 1997. The removal of mixed debris layers 1044, 1052 and 1053 exposed a deposit of grey green turf debris (context 1056) to the northeast of Structure E1, thought to represent the collapse of Skáli A/B. Prior to excavation in 1998, the limit of excavation in this area was extended east and north to clarify the extent of truncation of Skáli A/B by excavation in 1908. This showed context 1056 to be abutting the truncated remains of the western wall of Skáli A/B (context 1174), and the northern wall of Structure E1 (context 1055). Context 1056 was composed of collapsed turf, yellow brown, dark reddish brown, green and grey in colour, including the Landnáms tephra sequence. Context 1056 measured 2.70m east/west, 1.80m north/south (to the limit of excavation) and had a thickness of up to 0.28m, sloping downwards from east to west, becoming thinner towards its western limit. The composition and location of context 1056 confirm its interpretation as the western collapse of the walls of Skáli A/B. The removal of the latter context exposed an extensive deposit of pink peat ash (context 1057), and two small patches of grey ash and charcoal (contexts 1058 and 1098). Context 1058 measured 0.28m east/west , 0.17m north/south with a thickness of up to 30mm, and was located *c.* 0.10m to the north of Structure E1. Context 1098 measured 0.48m north/south, 0.43m east/west with a thickness of up to 25mm, and was located *c.* 0.40m north of Structure E1, 1.00m to the west of context 1058. Both latter contexts represent discrete dumping episodes, and overlie context 1057. Context 1057 measured up to 4.22m east/west, 1.78m north/south (to the limit of excavation) and had a maximum thickness of 0.27m at its southern limit, where it lay up against the northern wall of Structure E1. At the northern limit of excavation context 1057 was seen to be much less thick (not more than 15mm in depth when seen in section). Excavation of context 1057 revealed a multilenticular composition, including at least four major episodes of formation, and was sampled for further analysis. Context 1057 was seen to be very similar to additional peat ash

deposits partially exposed by excavation in 1997 (contexts 1063 and 1066).

In the area between Structures E1 and E2, the pink peat ash deposits 1063 and 1066 were seen to be partially covered by further layers of debris. The removal in 1997 of a widepread layer of turf debris (context 1044) had exposed numerous deposits in this area. Context 1082 was a layer of yellowish brown silt including red/black turf debris and occasional charcoal. The latter context was located to the north and west of Test Pit F (from 1908), and measured up to 1.90m north/south and 1.50m east/west, with a maximum thickness of 100mm. Beneath context 1082 was a more extensive layer of reddish brown turf debris (context 1084) extending southwards to Trench E. Context 1084 measured up to 3.60m north/south, 2.45m east /west, with a maximum depth of 50mm. Beneath the eastern limit of context 1084 was a layer of grey brown silt (context 1085) including red and yellow turf fragments. Context 1085 measured 1.65m north/south, 1.35m east/west, with a thickness of up to 0.20m. The northern limit of context 1085 had been truncated by Test Pit F, and at its eastern limit context 1085 lay up against the western limit of Structure E1. Beneath the eastern limit of context 1085 was a further small deposit of red brown turf debris (context 1086), overlying a deposit of yellowish brown turf debris (context 1107).

The removal of contexts 1107 and 1133 (see above) exposed a layer of yellow brown / red brown silt (context 1135) including fragments of turf. Context 1035 lay against a sub-square block of turf (context 1062) located at the western end of context 1055. Context 1062 was formed by layers of orange red / black / brown turf strengur, and measured 0.70m north/south, 0.60m east/west with a depth of up to 0.25m. The bedding angle of these turf blocks inclined downwards to the west, and context 1062 could be seen to sit over further layers of debris (contexts 1137 and 1139) that had accumulated against the western face of context 1055. Context 1062 is interpreted as a repair or addition to the northern wall of Structure E1. Context 1137 was a mid to dark brown layer of highly mixed turf debris located between the western limit of context 1055, and the southern edge of Test Pit F. Context 1139 was a more extensive deposit of yellow brown silt, including occasional fragments of turf debris, located to the north of Structure E1, around its western limit and extending up to 0.80m within the structure, to the south of context 1055. The western limit of context 1139 overlay the eastern limit of context 1147, a deposit of dark yellowish brown turf debris located against the eastern wall of Structure E2. Removal of context 1139 revealed three possible post holes to the north of Structure E1 (contexts 1176, 1177 and 1178) apparently truncating an extensive deposit of grey charcoal rich ash (context 1004).

Towards the northern limit of excavation, contexts 1064 and 1065 had been exposed by excavation in 1997. Context 1064 was located to the north of Test Pit F and was composed of a dark yellowish brown silt, and is seen as part of a natural process of soil deposition. Context 1065 was located to the north of Structure E2, measuring up to 1.10m north/south (to the limit of excavation), 3.40m east/west with a maximum thickness of 60mm. The latter context was composed of dark grey brown silt, and found to contain frequent fragments of charcoal and a moderate quantity of bone. Context 1112 was located against the northeastern edge of Structure E2, comprising greyish brown silt with fragments of turf, and measuring 0.90m north/south, 0.40m east/west and up to 40mm in depth. Excavation of contexts 1064, 1065, 1082, and 1112 exposed the full extent of peat ash deposits 1063 and 1066.

Context 1063 was located to the north of Test Pit F and was seen to continue beneath

the limit of excavation. Context 1063 was reddish pink in colour, including lenses of yellowish brown soil and occasional small flecks of charcoal, and in visible extent measured up to 2.80m north/south, 2.50m east/west, with a maximum depth of 90mm. Context 1066 was located up against the northwestern edge of Structure E2, measuring 1.04m north/south (to the limit of excavation), up to 3.20m east/west and with a depth of up to 0.16m. Context 1066 was formed by two major episodes of pink peat ash deposition, separated by a thin discontinuous band of dark grey ash, and was found to contain four joining pieces of a crude stone spindle whorl (F98-219/224).

Excavation of layers 1139 and 1147 (above) exposed the extent of a loose dark greyish brown silt (context 1144) exceptionally rich in faunal remains. Context 1144 extended east from the eastern limit of Structure E2, filling the external space between the two structures and terminated 0.70m within the western limit of Structure E1, measuring up to 4.80m north/south (to truncation by Trench E), 4.40m east/west, and 30-60mm thick. Context 1144 contained a total of 162 pieces of fire cracked rock, frequent charcoal and occasional lens of decayed organic material. It is estimated that bone and rock comprise up to 50% of the volume of this deposit. Small fragments of bone from this deposit were seen to apparently extend beneath the extreme south western limit of context 1055. However, examination of the upstanding remains of context 1055 could not confirm this relationship elsewhere. Deformation of the turf wall (context 1055) may account for this anomaly, and it is believed that context 1144 was deposited soon after the construction of Structure E1. Confirmation of this hypothesis would require the removal of all or part of context 1055.

Beneath the western limit of context 1144, a deposit of yellowish brown silt (context 1160) lay up against the eastern edge of Structure E2. Context 1160 measured 4.70m north/south (to truncation by Trench E), 0.85m east/west with a depth of up to 0.10m, and sealed a deposit of firm yellow brown silt and greenish grey turf debris (context 1172) including the Landnám sequence tephra. Context 1172 measured 4.45m north/south, 0.49m east/west and was up to 0.19m thick at its western limit, where it lay directly against the upstanding turf wall of Structure E2 (context 1068). At the northwestern limit of Structure E2, beneath peat ash deposit 1066, a dark blackish brown silt (context 1156) was identified, located up against the turf wall (context 1068). Context 1156 measured up to 1.73m east/west, 1.14m north/south (to the limit of excavation), with a depth of up to 60mm, and was found to contain both fish and mammalian bones, along with fragments of charcoal and an iron knife blade (F98-247). Context 1156 was sampled to maximise the recovery of faunal remains. To the north of Structure E2 context 1156 lay over the western most limit of context 1004. To the west, context 1156 lay over a turbated deposit of natural origin, incuding Landnáms sequence tephra (context 1073). Examination of context 1073 both in plan and in section has revealed a process of mixing affecting underlying natural deposits and overlying anthropogenic deposits. Sequences of horizontal deposition can be seen to have been tilted through as much as 90° within small localised angular blocks, typically 0.10-0.15m in size. These are currently thought to represent frost action.

Structure E2

Structure E2 (Fig. 4-3) was located in the western part of Area E, 3.40m west of Structure E1, and 8.30m west of Skáli A/B. The walls of Structure E2 are primarily formed by layers of red, yellow, green and purplish brown turf strengur (context 1068). The maximum external dimensions of context 1068 are 5.80m north/south and 3.80m east west, varying in width from 0.60m to 1.05m, and surviving to a height of 0.19- 0.21m at its external limits. The

upper part of context 1068 was exposed by excavation in 1997, which also exposed a deposit of mixed turf (context 1069) filling the internal area of Structure E2. Context 1068 was seen to be absent from the central portion of the western edge of Structure E2, an area later confirmed as the only likely entrance. Context 1069 exhibited the same range of colours as context 1068, and is likely to represent the collapse of the walls of Structure E2. The maximum internal dimensions of Structure E2 are 4.40m north/south and 2.10m east/west. Context 1069 sealed a deposit of more regular turf debris (context 1083). Context 1083 filled the internal area of Structure E2, to a depth of up to 0.14m, and was composed of long parallel strips of multi-coloured turf (red/black/green/brown). These are thought to be turf strengur lying on edge, and probably also represent the collapse of Structure E2. Context 1083 included occasional small lenses of pinkish brown organic matter, and a number of small angular stones (up to 80mm in length) towards its western limit. Removal of context 1083 revealed a pale to mid yellowish brown silt loam (context 1087) including frequent pale pinkish brown lenses of silt with an organic component. Context 1087 filled the internal area of Structure E2 to depth of up to 70mm, apart from a strip *c.* 0.40m wide adjacent to the western wall. In the northeastern quadrant of Structure E2 context 1087 was found to contain three pieces of decayed wood along with a concentration of wood charcoal. Context 1087 may represent the remains of an occupation layer, and was extensively sampled in order to gather data regarding the possible functions of Structure E2. The excavation of context 1083 also exposed a mixed dark yellowish brown clay silt (context 1124) partially filling the area of the entrance to Structure E2. Context 1124 measured 1.15m east/west, 0.35m north/south, with a depth of up to 110mm, and was found to contain occasional small charcoal fragments, small turf fragments, and several small sub-angular stones. In the area adjacent to the western wall of Structure E2, a soft yellow organic silt loam (context 1111) was seen to fill a linear feature (feature [1131]) alligned north/south.

Context 1111 contain frequent fish bone and occasional small lenses of white organic debris, and was 100% sampled for further analysis. Context 1111 had a very diffuse horizon with an underlying deposit (context 1120). Context 1120 was a pale greyish brown /yellowish brown silt including lenses of gritty material, and is believed to represent the discolouration and disturbance of natural deposits at the interface of feature 1131. Feature 1131 was an irregular steep-sided concave trough, measuring up to 3.95m north/south, 0.50m east west and with a depth of up to 0.17m. The western edge of feature 1131 respects the eastern edge of a stone facing (context 1173) of the western wall of Structure E2. Context 1173 is composed of a line of large unworked angular blocks of pale to mid grey basalt and lava stone. Context 1173 extended for 4.30m along the inner edge of the western turf wall (context 1068), and must represent the same episode of construction. The largest elements of context 1173 are two stones on edge at either side of the entrance to Structure E2. The largest (northern) stone of this pair measures 0.76m in length, 0.34m in width, and 0.52m in height. These two large stones constrict the entrance of Structure E2 to a width of only 0.32m, and it seems unlikely that either of the stones have shifted a significant distance since their original placement.

Excavation of the above contexts exposed a deposit of dark brown sandy silt (context 1163) in the northwestern quadrant of Structure E2, measuring 1.70m in length, up to 0.30m in width, with a maximum depth of 30mm. Context 1163 was seen to partially cover the fills of two large square postholes (features [1165] and [1167]) truncated by the eastern edge of feature

1131. Two further large square post holes (features [1128] and [1130]) were identified at the eastern edge of feature 1131 in the south western quadrant of Structure E2.

Feature 1130 was located at the southwestern corner of Structure E2, measuring 0.22m north/south, 0.30m east/west and 0.58m in depth. The southern and eastern upper edges of feature 1130 were formed by slabs of stone, extending 0.30-0.40m to the south and east. Feature 1130 was filled by a mid yellow brown silt (context 1129) containing frequent small flecks of white tephra (H3). Feature 1128 was located 0.90m north of feature 1130, *c.* 0.60m to the southeast of the entrance to Structure E2. Feature 1128 measured 0.29m north/south, 0.24m east/west and 0.58m in depth, and was filled by a mid yellow brown silt (context 1127) containing frequent small flecks of white tephra (H3). Feature 1165 was located 0.85m north of feature 1128, *c.* 0.60m to the northeast of the entrance to Structure E2, and measured 0.32m north/south, 0.28m east/west and 0.46m in depth. Feature 1165 was also filled by a mid yellow brown silt (context 1164) containing frequent flecks of white tephra (H3). Context 1164 was also seen to include occasional small lenses of grey clay silt, and became more compact towards the base of feature 1165. Feature 1167 was located at the northwestern corner of Structure E2, 0.90m to the north of feature 1165, and measured 0.28m north/south, 0.22m east/west with adepth of 0.54m. Feature 1167 was filled by context 1166, a mid yellow brown silt including frequent flecks of white tephra (H3) and occasional small lenses of grey clay silt.

All four latter postholes were sub-rectangular in shape, with nearly vertical sides, slightly rounded corners and flattish bases. All four also exhibited a slight inclination of axis (*c.* 5°) towards the entrance of Structure E2, at the centre of the western wall. These latter features had all been slightly truncated by feature 1131, and all truncated a dark grey deposit (context 1134)including charcoal and burnt bone within the internal area of Structure E2. Context 1134 could be seen to extend beneath the walls of Structure E2 (context 1068), and is believed to pre-date the construction of Structure E2. Context 1134 was excavated, and was seen to seal natural deposits including the *landnám* tephra sequence (context 1003). Context 1134 is believed to be equal and equivalent to context 1004, located externally to Structure E2.

Skáli A/B

Extension of the eastern limit of excavation in 1998 revealed the western extent of the excavation undertaken by Daniel Bruun and Finnur Jónsson in 1908. Removal of backfill from the western most part of the 1908 excavation exposed the truncated upstanding remains of the western walls of Skáli A/B (contexts 1174 and 1175). No further excavation was undertaken within this structure during the 1998 season. Some preliminary observations were made. Despite truncation by Trench E, it is clear that the western wall of Skáli A/B is discontinous, and that there was an entrance between Skáli A/B and Structure E1. To the north of Trench E, the western wall of Skáli A/B is formed by context 1174. Context 1174 is composed of dark brown / dark grey / green klömbruhnaus (herringbone) turf blocks, typically around 0.30m in length and 30-40mm in thickness. The extant remains of context 1174 measure 3.06m north/south (to the limit of excavation) 0.30-0.60m east/west (truncated to the east) and 0.32m in external height / 0.42m internal height. Context 1174 terminates to the south without truncation by Trench E. To the south of Trench E, the western wall of Skáli A/B is formed by context 1175. Context 1175 measures 2.60m north/south (to the limit of excavation), 0.28-0.38m east/west (truncated) and 0.28m external height / 0.34m internal height. Context 1175 was formed by dark brown / dark grey /green

turf blocks, although these exhibited much less regularity than those seen within context 1174. The upper portion of context 1175 appears to utilise klömbruhnaus turf, but less well ordered than those seen in context 1174. The lower portion of context 1175 is composed of irregular, small, horizontal turves. At the base of the 1908 truncation, adjacent to contexts 1174 and 1175 are a line of large (up to 0.50m) angular stones that may have formed a foundation course for the western wall of Skáli A/B. Unfortunately, the relationship of these stones to contexts 1174 and 1175 has been truncated.

Both latter contexts appear to lie directly over natural deposits including the Landnáms tephra sequence. Neither context 1174 or 1175 is seen to have a direct relationship with context 1004.

Context 1004
Excavation in 1998 continued down to the surface of a widespread deposit of grey/black silt (context 1004) seen to include frequent small fragments of charcoal and burnt bone. This deposit is very similar in composition to context 0004/C4 seen within excavation areas A, D and G, but no stratigraphic relationship can be demonstrated at this time. Context 1004 is somewhat variable in both colour and composition, and is thought to represent many small episodes of deposition forming an horizon of dumping across much of Area E. Context 1004 can be shown to be earlier than both Structures E1 and E2, but appears to respect Skáli A/B. Where truncated by Trench E and other cut features, context 1004 can be seen to overlie a deposit of yellow brown silt (context 1179) including flecks of white tephra (H3). The full nature and extent of context 1179 is not known at this time, but it is believed to represent natural deposits upcast by the earliest process of construction at Hofstaðir. Context 1179 can be shown to sit directly above a complex sequence of natural deposition (context 1003), including numerous tephra horizons and layers of aeolian silt / loess.
Contexts 1004 and 1179 are unexcavated at this time and await further investigation.

Discussion / Conclusions

The results detailed above describe episodes of construction and deposition within Area E. Prior to the completion of further analyses, in particular soil micromorphology, soil chemistry, and the detailed study of faunal remains, any discussion of the likely function of Structures E1 and E2 is of a preliminary nature and subject to revision. Excavation has yielded little conclusive evidence for the interpretation of Structures E1 and E2. Nonetheless, some initial conclusions can be drawn, not least from features and layers absent from those structures.

The absence of any heat source within either Structure E1 or E2 and the confined internal dimensions of those structures suggest that neither structure was used as a dwelling space. Nor were any artefacts diagnostic of any particular domestic function recovered from within either Structure E1 or E2. Both structures are also somewhat smaller than any excavated structures previously identified as animal shelters in Iceland, and lack other features consistent with animal overwintering. It seems that both structures are more likely to have served as areas for the storage or processing of commodities required by the inhabitants of the Hofstaðir complex.

Structure E1
The heavily truncated nature of Structure E1 and the unfortunate location of that truncation are factors that limit our ability to define the nature and purpose of that structure. Similar sequences of deposition can be seen to the north and south of Trench E, but the direct equivalence of these sequences cannot be demonstrated. The location of Trench E, cutting directly through the connecting space between

Structure E1 and Skáli A/B, and the considerable truncation of Skáli A/B itself, may prevent a complete description of the relationship between these structures. Excavation in 1998 revealed no clear indication of a western turf wall to Structure E1. It is possible that this structure had a timber western gable incorporating a doorway. A number of intercutting post-holes were identified at the north-western corner of Structure E1 (features [1150], [1153] and [1155]), along with traces of a compacted surface (layer 1152). These features are consistent with a timber gable end and the trampling of a threshold. However, truncation has destroyed the centre and southwestern corner of Structure E1, removing possible comparable features along with the western end of the southern wall (context 1074). The depression left by a possible post-pad (feature [1081]) was identified at the base of Trench E, located along the line of a putative western gable. Without any direct stratigraphic connection to other elements of Structure E1, this feature can only be tentatively associated with other elements. The surviving elements of a possible western gable were sealed beneath several varied deposits of turf debris, spreading beyond the western end of Structure E1. Those debris layers also extended beneath internal deposits further east in Structure E1. It seems likely therefore that this part of the structure was altered at some point during its use. This is supported by the presence of a repair or addition (context 1062) over some of those debris layers. Also sealing those features are the westernmost elements of a large bone rich midden layer (context 1144) that extends west up to the eastern limit of Structure E2.

Investigation of the relationship between the southern wall of Structure E1 and the western wall of Skáli A/B revealed the presence of a probable entrance at that junction. The southern wall of Structure E1 does not adjoin the western wall of the Skáli. There is gap of 0.66-0.74m, filled by turf debris of a colour consistent with the westward collapse of the Skáli wall. This debris was also found to fill part of the internal space of Structure E1, and to have been deposited against the external face of its southern wall. Towards the base of this entrance a refuse layer rich in faunal remains (context 1123) was recovered. Context 1123 extended into both the internal and external space at either side of this opening, but respected the walls of both Structure E1 and Skáli A/B. As such, this layer appears to represent the use of this opening as a route for the disposal of refuse. At its internal limit context 1123 was overlain by a series of fine internal deposits (contexts 1119 and 1094). Macroscopic examination of these deposits revealed a fibrous component, and microscopic examination of similar deposits recovered in Area D in 1997 demonstrated the presence of phytoliths consistent with the deposition of hay (Karen Milek pers.com). A more complex sequence of such deposits was removed from the northern part of Structure E1, following micromorphological sampling. These thin layers represent the most recent use of Structure E1. The absence of consistent compaction or dark occupation horizons would seem to indicate that these layers do not represent floors trampled by frequent traffic. Their function seems to have been to repeatedly provide a relatively hygienic surface within the structure. Such layers would rapidly accumulate and would have had to be removed periodically. That process would also tend to truncate any underlying deposits that could indicate an earlier function. An earlier period of use is inferred from a number of small post holes sealed beneath those later surfaces, and from the stratigraphic position of possible elements of a western gable.

In addition to these small internal post holes, the internal faces of the turf walls of Structure E1 exhibit several small vertical indentations. These are thought to indicate small structural elements pressing against

and into the turf walls. Taken together these features may represent the remains of wooden fixtures within Structure E1, serving to divide the internal space, possibly providing a number of separate spaces for storage.

Another factor in determining the function of Structure E1 is its position adjoining the Skáli A/B. The absence of a substantial turf wall at its western limit implies that Structure E2 also functioned as a northwestern entrance to the Skáli. It seems unlikely that this could be its sole function, and the later internal layers do not seem consistent with heavy through traffic. It may be that these internal layers were compacted in an area along the centre of the structure, and the remnants that had survived truncation in this area were indeed found to be more compact. It is unfortunate that the compaction of these possible floor remnants may be the result of trampling in 1908, and not the 10th century.

Structure E2

Structure E2 has the confined dimensions and separate location often seen as consistent with use as a smithy, but the absence of slag, charcoal, or any heat source allow this possible function to be dismissed. The confined internal space and narrow entrance to Structure E2 also eliminates the possibility of its occupation by any large animals. Animal overwintering of any kind would have involved some deposition of dung. No such deposits were identified, and neither was there any widespread truncation of underlying layers, as would be expected if layers of dung had been regularly removed. The unusual, and remarkably sturdy construction of Structure E2 also merits further comment. The large stones forming the inner face of the western wall (context 1173) would have had some cost in terms of construction effort, and are likely therefore to have served a particular function. That function may be connected with the trough-like feature [1131] at the eastern edge of those stones. This robust facing would act to reinforce the foundation of this wall, and may have been necessitated by a function of feature [1131] that was seen as likely to undermine the integrity of the turf element of that wall (context 1068). The four large square post-holes ([1128], [1130], [1165] and [1167]) at the eastern edge of feature [1131] surely also indicate some special structural requirement. Each of the post-holes measures approximately 0.30m x 0.25m x 0.50-0.60m in depth, much larger than any other post holes discovered in Area E. Each post-hole exhibits some small inclination of its axis towards the entrance of the structure at the centre of the western wall, although this may only be indicative of the angle from which the post-holes were cut and not the alignment of posts within them. These post holes are suggestive of a substantial timber superstructure within Structure E2. The most obvious function of large posts would be to support a roof, but the position of the post-holes towards the western limit of the structure would appear to indicate an irregular and asymmetrical roof, as no corresponding post-holes could be located towards the eastern limit of Structure E2. A number of flat stones possibly utilised as post-pads were recorded at the inner edge of the eastern turf wall (context 1068), but these could not be shown to have any straightforward association with the row of post-holes, and would still be indicative of an irregular structure. A small quantity of decayed wood was located within the extensive turf debris layers filling Structure E2, but not the fragments of birch twig often seen as indicative of a roof collapse. The well ordered nature of the lower elements of the turf debris (contexts 1069 and 1083) is seen as consistent with the inward collapse of walls composed of turf strengur. The possibility remains that Structure E2 was not a roofed building, although this observation offers little assistance in determining its function.

No clear parallels can be drawn between Structure E2 and other structures thus far

excavated in Iceland. It would be tempting to assign a highly specialised or ritual function to this structure, but the absence of compelling evidence for any ordinary function must not be taken as evidence of the extraordinary. It merely indicates our imperfect understanding of early Icelandic structures, and this ought to encourage new and varied approaches to assist interpretation. Extensive micromorphological sampling from this structure, facilitated by excavation in opposing quadrants, should enlarge our understanding of the processes at work within Structure E2 and allow us to develop new interpretations of this evidence. It is more likely that a mundane interpretation is appropriate.

As an interim hypothesis it is suggested that Structure E2 was used to store commodities not required by the inhabitants of the Skáli on an everyday basis. Set apart from the main building complex, the space between Structure E2 and that complex was utilised for some time as an area for refuse disposal. The dense, bone filled midden layer (context 1144) was deposited in the area to east of Structure E2, although quantities of wood charcoal and fire-cracked stone within that layer point to its origin at a heat source, and therefore not within Area E. This deposit does nonetheless suggest that this area was not frequently traversed, or utilised for other purposes at the time context 1144 was deposited.

The trough-like feature [1131], and the stone facing forming its western limit (1173), together with discolouration observed affecting natural deposits at the base of feature [1131] are seen as consistent with the presence of a liquid within that feature, or the drainage of a liquid away from the main internal area of Structure E2. It is hoped that further analysis of the deposits filling feature [1131] may shed further light on this possibility. A number of different liquids are likely to have been stored on sites of this period, including milk / whey, urine, clothing dyes and possibly beer. However, the storage of these commodities is usually associated with presence of sunken barrels and such features are absent thus far from Hofstaðir, and are not typically found on sites from this period.

Heat Sources and Context 1004

Beneath both Structures E1 and E2 lies the extensive context 1004, containing significant quantities of charcoal and burnt bone. This deposit must be associated with, and originate from, a heat source. No such heat source can been identified within Area E. The only well defined heat sources at Hofstaðir are those fireplaces excavated by Daniel Bruun within Skáli A/B (Bruun, 1909 a). These features, (H, I, J, K, and O) could be expected to generate some quantities of ash and refuse. Bruun describes deposits associated with feature H, an open fireplace at the centre of the Skáli, as containing quantities of fire-cracked stone, and pieces of charcoal (large enough to support species identification). Similar deposits have long been identified within Area G. If refuse from the fires of Skáli A/B was not dumped in Area G, then it ought to be identifiable elsewhere at Hofstaðir. There are a number of layers within Area E consistent with the deposition of such debris, not least context 1004.

Bruun also describes other features (L and M) associated with heat sources. Feature M is located at the northern limit of Skáli A/B, and is described as a layer of charcoal and wood ash. The significance of this layer is that it is described as continuing beneath the walls of structure C, thus suggesting that structure C belongs to a later phase of construction, together with its fireplace, feature O. Feature L is a large bowl shaped pit situated close to the junction between Skáli A/B and Structure E1. It is described as containing fire cracked stone, and at its base a layer of earth and charcoal. Further investigation of this feature in 1992 (ArchÍs, vol.1, pages ??) also revealed the

presence of iron slag. Features I, J and K are described as the remains of small fireplaces. It is of note that similar features and associated layers are seen to be absent from Structures E1 and E2.

The extent of context 1004 appears to respect the walls of Skáli A/B and is likely to have been deposited after the construction of the Skáli A/B. It is therefore possible that layer 1004 originates from one or more of the heat sources within Skáli A/B. This suggestion raises a number of further questions. If context 1004 originates from within the Skáli A/B, then its deposition must be later than the construction of the Skáli. However Context 1004 may represent a period of deposition that is separate from and later than context 0004. In order to define the relationship between these apparently very similar horizons, further excavation is necessary in the area between Area E and Area D to establish a clear stratigraphic link.

Additionally, it is also possible that the Skáli A/B itself represents several different episodes of construction and re-construction. As noted previously, the remains of the western wall of the Skáli A/B (contexts 1174 and 1175) exhibit a variable use of turf, possibly belonging to more than episode of construction. A similar process is seen Area D. The identification of several fireplaces within the Skáli A/B, together with the remains of several others, also suggests that the use of space within Skáli A/B was subject to change over time, and this would be consistent with the remodelling and expansion of that space and the addition of subsidiary structures.

It seems unlikely that the large pit feature L would have been in use at a time when access to Structure E1 was necessary, as this feature obstructs passage between Structure E1 and the Skáli A/B.

Layer 1004 is not the only layer within Area E that must have originated elsewhere. Abutting both the western wall of Skáli A/B and the northern wall of Structure E1 was a thick deposit of bright pink peat ash (context 1057). This layer must have been deposited whilst both walls were standing, as it was sealed beneath extensive deposits of turf collapse. Context 1057 represents numerous deliberate dumping events of a single variety of refuse at a clearly defined location. Similar peat ash deposits (contexts 1063 and 1066) can also be seen abutting the northern limit of Structure E2. No similar deposits, nor traces of similar deposits were identified within either structure, nor to the south of either structure. This suggests that these deposits were brought in from a source to the north of the area thus far investigated, and it remains a possibility that further structures await investigation in that area. It is also possible that the later construction of Structure C, at the northern limit of Skáli A/B has truncated or obscured the remains of earlier buildings, and/or the original northern portion of the Skáli A/B, thus removing the source of the peat ash deposits.

In order to address the possibilities of structural change within the Skáli, and thus better understand the temporal relationships within the Hofstaðir complex, it will prove necessary to re-excavate the Skáli A/B itself.

Context	Description
1001	Modern turf and topsoil
1002	Backfill of 1908 excavation
1003	Undisturbed natural deposits
1004	Dark grey charcoal/ash layer (=0004?), throughout Area E
1015	Collapse of Structure A/B within E1.
1016	Aeolian loess, sealing archaeological deposits.
1027	Cut of the 1908 excavation (Trench E, TP-F, A/B)
1030	Green-grey internal layer, northern part of E1.
1035	Red-brown silt with turf debris, western part of E1
1041	Grey-brown silt with turf debris in E1
1042	Grey-brown silt with orange-red turf debris in E1
1043	Dumping, north of E2
1044	Red-brown turf debris between E1 & E2
1045	Grey-brown soil south of E1
1046	Highly mixed debris in northern part of E1
1047	Highly mixed debris in northern part of E1
1048	Collapsed turf block in northern part of E1
1049	Turf debris in southern part of E1. *Equals 98 layer (1092)*
1050	Mixed turf debris south of E1. *Equals 98 layer (1089)*
1051	Turf collapse in southern part of E1. *Equals 98 layer (1116)*
1052	Turf debris north of E1
1053	Grey-brown silt north of E1
1054	Turf debris south of E1. *Equals 98 layer (1090)*
1055	Northern turf wall of E1
1056	A/B turf collapse north of E1
1057	Pink peat-ash north of E1
1058	Charcoal patch north of E1
1059	Grey ash & charcoal layer north of E1. *Equals layer (1004)*
1060	*Replaced by 98 layers (1082), (1084), (1085), (1086), (1107) etc.*
1061	*Replaced by 98 layers (1082), (1084), (1085), (1086), (1107) etc.*
1062	Repair to northern wall of E1
1063	Pink peat-ash northeast of E2
1064	Aeolian soil northeast of E2
1065	Charcoal rich dump layer north of E2
1066	Pink peat-ash northwest of E2
1067	*Replaced by 98 layers (1112), (1147) etc.*
1068	Turf wall of E2
1069	Turf debris inside E2
1070	*Equals 98 layer (1069)*
1071	*Equals 98 layer (1073)*
1072	*Replaced by 98 layers (1095) and (1099)*
1073	Frost disturbed natural deposit southwest of E2
1074	Southern turf wall of E1
1075	Grey-green internal layer in south part of E1
1076	*Replaced by 98 layers (1110) and (1114)*
1077	*Replaced by 98 layers (1110), (1114) and (1116)*
1078	Grey ash & charcoal layer south of E1. *Equals layer (1004)*
1079	Remnant of surface within E1, below base of [1027].
1080	Fill of [1081]
1081	Shallow irregular cut / hollow, western end of E1, below base of [1027]

Context	Description
1082	Debris / accumulation at western end of E1
1083	Turf collapse debris within E2
1084	Turf debris associated with E1
1085	Turf debris associated with E1
1086	Turf debris associated with E1

1087	Disturbed surface(floor?) within E2
1088	Turf debris within E1
1089	Accumulation / debris south of E1. *Equals layer (1050)*
1090	Turf debris southwest of E1. *Equals layer (1054)*
1091	Pale grey ash deposit, southwest of E1
1092	Collapsed wall / debris. *Equals layer (1049)*
1093	Turf debris within western end of E1
1094	Pinkish brown surface, within southern part of E1
1095	Grey ashy deposit, southwest of E1
1096	Soot /charcoal layer beneath (1030)
1097	Pinkish brown surface, within northern part of E1
1098	Grey ash / charcoal patch north of E1
1099	Mixed brown debris, southwest of E1
1100	Pinkish-brown surface, within northern part of E1
1105	Dumping episode, southwest of E1
1106	Pinkish brown surface, within northern part of E1
1107	Mixed debris west of E1
1108	Turf debris, south of E1
1109	Grey brown internal layer, northern part of E1
1110	A/B Turf collapse, south of E1
1111	Refuse, filling [1131]
1112	Aeolian deposit, northeast of E2
1113	Pinkish brown surface, within northern part of E1
1114	Mixed turf debris, south of E1
1115	Pinkish brown surface, within northern part of E1
1116	*Equals layer (1051)*
1117	Fill of [1118]
1118	Post-hole, within northern part of E1
1119	Grey brown internal layer, southern part of E1
1120	Lower fill of [1131]
1121	Fill of [1122]
1122	Cut for post-pad (?), southern part of E1
1123	Rubbish / midden layer , within and south of southern entrance E1.
1124	Fill within western entrance E2
1125	Post-hole within southern part of E1
1126	Fill of [1125]
1127	Fill of [1128]
1128	Large post-hole within E2, southwestern corner
1129	Fill of [1130]
1130	Large post-hole within E2, southwest- centre
1131	Cut of trough / western entrance E2
1132	Turf debris, western end of E1
1133	Mixed brown debris, western end of E1
1134	Dark grey silt with charcoal, within E2. *Equals layer (1004)?*
1135	Mixed turf debris, between E1 and E2
1136	Turf debris, south of E1
1137	Mixed turf debris, between E1 and E2
1138	Turf debris, within and south of southern entrance E1
Context	**Description**
1139	Highly mixed turf debris, north of E1 and between E1 and E2
1140	Fill of [1141]
1141	Post-hole with post-pipe, south of E1
1142	Fill of [1143]
1143	Post-hole, south of E1
1144	Bone rich midden deposit, between E1 and E2
1145	Fill of [1146]
1146	Post-hole, south of southern entrance E1, cutting wall of A/B
1147	Mixed debris east of E2
1148	Fill of [1149]
1149	Post-hole, south of E1, west of A/B

1150	Post-hole, within western end of E1
1151	Fill of [1150]
1152	Compacted “threshold” layer, at western end of E1
1153	Post-hole, within western end of E1
1154	Fill of [1153]
1155	Post-hole, within western end of E1
1156	Refuse and charcoal layer, northwest of E2
1157	Fill of [1155]
1158	Fill of [1159]
1159	Post-hole, within northern part of E1
1160	Debris east of E2
1161	Fill of [1162]
1162	Post-hole, within northern part of E1
1163	Internal deposit, E2, northwestern quadrant
1164	Fill of [1165]
1165	Large post-hole within E2 northwest-centre
1166	Fill of [1167]
1167	Large post-hole within E2 northwest corner
1168	Fill of [1169]
1169	Post-hole, within northern part of E1
1170	Fill of [1171]
1171	Post-hole, within northern part of E1
1172	Compact turf debris against eastern wall of E2
1173	Large structural stones in western wall of E2
1174	Western wall of A/B (northern part)
1175	Western wall of A/B (southern part)
1176	Possible posthole fill, north of E1 and west of A/B
1177	Possible posthole fill, north of E1 and west of A/B
1178	Possible posthole fill, north of E1 and west of A/B
1179	Disturbed natural, “upcast layer” below (1004)
1180	Grey sandy silt between E1 and A/B
1181	Compacted natural deposit, at western end of E1

Table 4-1. List of contexts in Area E

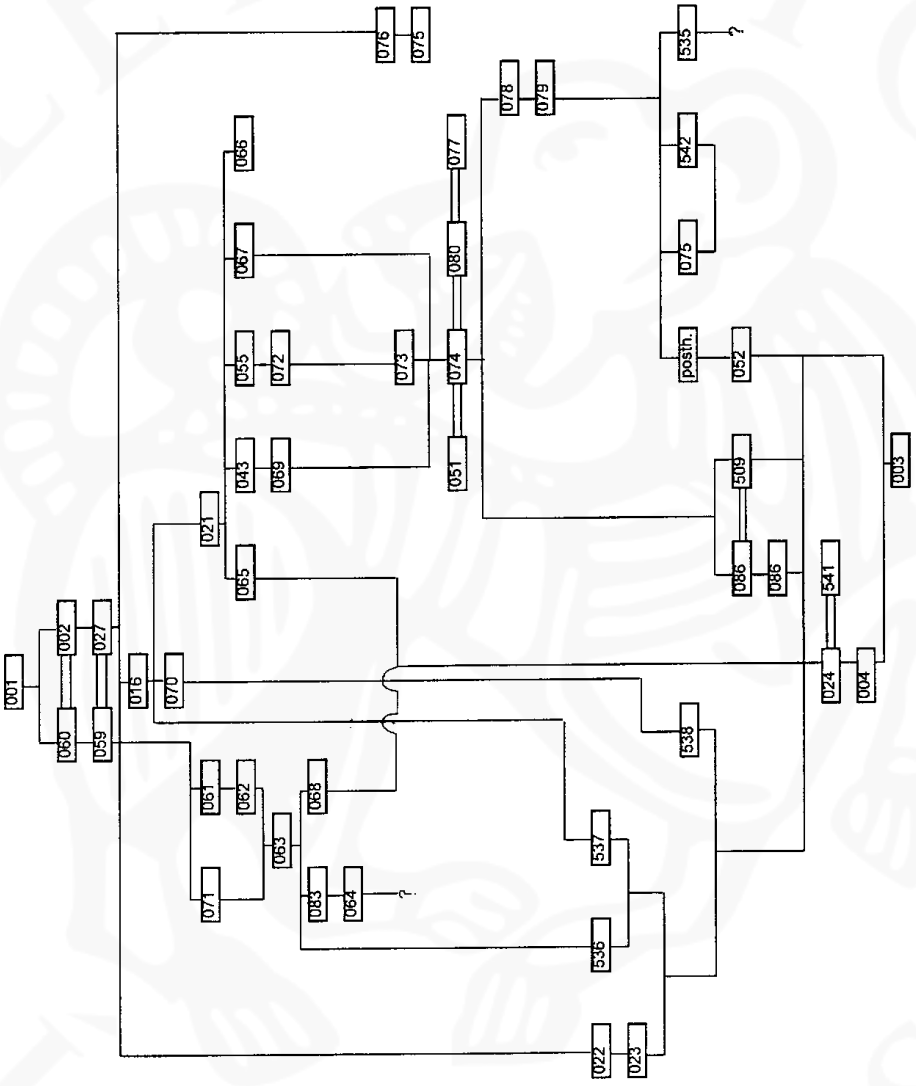


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Figure 4-4. Area E Matrix.

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5.0 Area G Excavation Report

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Feature G 1998 Season Objectives

The primary objective of the excavations in feature G during the 1998 season was to complete the systematic clearing of the remaining midden fill from the sunken structural feature at the base of the G depression. The 1996-97 work had served to identify the major depositional contexts across the unit, making extensive use of the profiles established by the original 1908 excavation (profile references 106,107,108,109,110). These layers had been physically traced across the fill of the entire G unit in many cases, and had been extensively marked with aluminum tags prior to backfilling in August 1997. The horizontal exposure of the northern quadrants (x216-220/y469-471) in 1996 and especially in 1997 had revealed the general depth and extent of the midden fill, and had exposed the northern two corners of the wall tops of the structure beneath.

The prior seasons thus set the stage for a steady and decisive removal of the stratified midden deposits, which began August 4th and was effectively accomplished by Aug 25th. Approximately twice the volume of material was excavated in 1998 as in 1997, with no reduction in quality of recovery or stratigraphic control. The highly professional excavation skills of Sophia Perdikaris and Clayton Tinsley were major factors in this work, backed by the able assistance of a number of the 1998 field school crew notably including Linda Livolsi, Sandra Meadows, Meredith Vasta, and Lisa Alter. As in 1997, a combination of open area and quadrant style profile cutting provided a good view of horizontal and vertical relationships, and allowed for steady reduction of the south half of the midden fill. While conditions of organic preservation were more varied than in prior seasons, a very large archaeofauna was collected, certainly representing the most significant zooarchaeological collection dating to this period yet recovered from Iceland.

Investigations Carried Out in 1998

NE Quadrant: While the major focus of excavation in 1998 was on the southern half of the G unit, from approximately the y 469 line to the edge of the emerging structure wall in the 466-465 area, additional work in the NE quadrant (approximately 218/469-220/470) also produced significant results. Stratigraphic excavation in this area removed the last of the context 6 series layers from the NE corner and also revealed a complex series of [0007] midden deposits which inter-bedded with episodes of wall collapse([0008] series) from [0010] (the cream colored earthen wall with its patches of displaced prehistoric white tephra). This NW corner also revealed an extensive layer of water rounded pebbles and charcoal extending over nearly 1.5 square meters ([0006w]), very similar in character to smaller concentrations of pebbles recorded in 1996-97 from the [0004] layers in this same NE quadrant. Last season we speculated about water transport as a possible mechanism for the deposition of these pebbles. However, the context 0006w deposit cannot have been water transported, as there is no trace of the gullying or down cutting in the [0010] wall uphill, as would certainly have taken place had there been enough water movement to transport this volume of material. We should thus better regard this deposit (and probably the ones observed in [0004] stratigraphically above) as purposive dumps of unwanted materials. Ragnar Edvardsson suggested the deposit had some similarity to specialized smithing hearth debris, and it is possible that these deposits represent the clearing of a specialized hearth of some sort. Work in the

NE quadrant also revealed that the concentrations of fist-sized (10-20 cm) fire cracked stones drawn in the 1997 horizontal plan in 217/470-471 are also the product of a dumping event, and not part of either the buried structure or the wall fall. A second concentration in 217-218/469 also proved to be embedded in midden fill and not associated with the structure floor or wall collapse. As we were to discover in the SW quadrant of feature G, substantial dumps of clusters of fire cracked stones was a regular feature of the midden fill, especially towards the base of the context 6 series and the center of the unit.

The [0007] series in the NW quadrant proved more complex than the 1908 profiles initially suggested, with several phases of midden deposit becoming covered with successive erosional 'melting' events ([0008a-8e9) that carried the creamy [0010] wall material down over the midden fill (especially in the band within a meter or so of the wall edge). It is clear that the G structure was open to the air and eroding gradually while relatively small volumes of refuse were thrown in, but that the rate of deposition accelerated rapidly with the [0005] & [0006] series midden layers, which show little or no admixture of wall fall debris. A notable context in the lower [0007] series was the [0007e] layer, which had been just revealed at the end of excavation in 1997. This layer of greyish brown silt contained an incredible concentration of salmonid (char, trout, or salmon) bones, mainly vertebrae but also containing cranial bones and some fin rays. This concentration extended over nearly 2 square meters, and comprised hundreds of vertebrae mixed with a large number of small spiral gastropod (snail) shells. The deposit was collected as whole soil samples and transported back to the field base for wet sieving through 1 mm mesh, and a sub sample was taken for flotation. Dr. Arni Einarsson kindly identified the gastropods as common prey of trout in the lake and Laxa, and suggested that we are looking at stomach contents of trout or char. It would appear that a catch of fish either spoiled or for some other reason was dumped into the midden in nearly whole condition, without gutting or removal of heads and fins. The [0008c,d,e] series below proved to be mainly wall fall with less organic debris, and contained many pieces of displaced turf (with heavy LNL tephra concentrations just below their turf lines) slumped down from the wall just above. The last day of work in this quadrant revealed a dark, bone rich deposit in 218/470, which may reflect either a still earlier phase of midden deposit or the first floor layer. As our intention was to avoid prematurely exposing the floor layers in 1998, we did not investigate this still undescribed context further.

SW & SE Quadrants: Cleaning of the [0010] wall in the 216/469 area revealed a thin layer of turves (again rich in LNL tephra) directly between the creamy [0010] context and the [0008] wall fall series. As indicated in Vesteinsson & Fridriksson's 1995 profile 107 drawing, the bedding angle of the [0010] wall is only a few degrees from vertical, and it appears that a layer of turves were laid along at least the upper portions of the wall face in at least part of G, perhaps to stabilize the fairly loose [0010] soil matrix. Bones and stones recovered along the wall edge confirmed the steep bedding angle with near-vertical orientation. The SE quadrant fill proved to slope in sharply, with the rectilinear corner of the structure appearing near the end of the 1908 trench in 219/466. The remaining SW corner appeared as expected in 217/465, confirming the sub-rectangular layout of the G depression, and strongly supporting the interpretation of the feature as a pit house of considerable size (see Fig. 5-1).

The [0004] sheet midden deposit continued about 5-8 cm thick along the SE wall top, but thinned considerably and ended in the SW corner, stopping entirely just short of the corner in 217/465. While additional

investigation will be worthwhile, it would appear that the extensive [0004] deposits originated somewhere to the N-NE of the G area. The [0005] and [0006] series below [0004] followed their general character observed in the north half of G, and indeed many layers could be traced along profiles 110 right around the SE end of the 1908 trench and along the 109-108 profiles. As in the [0006hk] layers excavated from the NW quadrant in 1997, the interface between both the lower [0006] series contexts and the [0007] series, and the interface between the [0007] series and the top of the [0008] wall fall was extremely rich in well preserved mammal bones in the 216-218/467-468 area, and along the 109 and 110 profiles in the SE quadrant. However, the bone preservation in the SW corner (217/466-218/467) was very poor, with large amounts of unrecoverable 'bone mush' being observed (even teeth were in nearly unrecoverable condition). As soil pH in this area was measured at 6.8 (nearly neutral, as the other midden layers), the most probable explanation for this localized pattern was mechanical destruction by enhanced freeze-thaw cycles associated with an exceptionally large concentration of substantial (25-30 cm) fire cracked stones. These stones formed a considerable pile, comparable in extent to the concentration discussed in 217/470 in the N half, but made up of larger rocks. Bone preservation was noticeably better outside the immediate vicinity of this rock pile. As in the NW quadrant, all these stones lay above the [0008] series and were part of the dumped fill rather than structural debris.

The small test pit in 218/467-468 extending into the [0009] floor layers was briefly reopened in 1998 to allow for extension of the profiles to the limit of the excavation, but in no other area were floor layers reached. The midden deposit has now been largely or completely cleared from the G depression, and we estimate that between 5-15 cm of wall fall remains above the floor layers. The line of the now removed 1908 profiles was retained by ring pins left in place during backfilling. The 1999 season should allow transition to full scale architectural investigations.

Recovery Methods

As in 1996-97, all excavated soil was put through 4 mm mesh dry sieve with subsamples sent to 1mm mesh wet sieve or flotation. Seven Bigelow Mk 7 and Mk 8 hanging sieves were in use on site by mid season, and conditions of recovery we uniformly good and backdirt piles commendably sterile. Bone bearing deposits in the other excavation areas (D & E) were sieved to the same standard. It was found that for many bone -rich contexts excavation aided by immediate sieving actually progressed faster than hand-picking, and with a far greater consistency of recovery. As in prior years, virtually all the glass and amber beads recovered were found in sieving.

Conditions of Preservation

As noted in the 1996 and 1997 preliminary reports, conditions of organic preservation were generally excellent across the site. Bone recovered from areas A, D, and E was in good to fine condition (including additional cattle crania from D and a definite adult harp seal femora from above the 1477 tephra in the NE corner of A). Soil pH (acidity) was measured in spot samples in all units using a Kelway pH meter, and values ranged from 6.2-6.8. These fairly basic values suggest generally favorable conditions for bone preservation across the site, and raise hopes for animal (and possibly human) bone recovery in future seasons. As noted above, the only pocket of poor bone preservation noted was around the pile of fire cracked stones in the SW corner of the G unit. Several examples of articulation were observed in excavation, and additional concentrations of bird egg shell were recovered, suggesting minimal post-depositional disturbance or reworking.

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For the first time, frost patterning (small polygons, wedges approximately 2 cm wide x 2 cm deep) was observed on in the soil below the 1477 ash and above the 1104/58 ash along the E side of the wall of the pithouse. Additional small patches of apparent frost patterning in similar stratigraphic position were observed in portions of D. Is this evidence of some later medieval cold episode?

Finds

Artefacts recovered from the G midden fill include a cross-headed bone pin, several grey schist whetstones, several beads of glass and amber, an iron ice creeper (to be attached to a human or horse shoe), many iron nails and a large amount of iron slag fragments. Also recovered were two decorative studs, one a simple brass convex tack head, the other a more elaborate bronze cube decorated on one face with cross hatching. The function of these studs is unknown, though similar fittings are to be seen on the woodwork of the elaborately carved sledge and wagon recovered from the Oseberg ship burial. Overall, the artifact finds from the 1998 investigations at G confirm the impression provided by the finds made in 1996-97: a wide range of activities are reflected, including iron working and the intentional or accidental deposit of personal possessions and ornaments. This pattern of artifact distribution is similar to that observed in other medieval and early modern midden deposits, and does not indicate any specialized nature for the deposit in G. All finds were consistent with a Viking Age date.

Bone and Shell

As in prior seasons, the most common finds in the G midden fill were animal bones and bird and mollusc shell. Bird egg shell concentrations (probably representing individual eggs) were recovered throughout the layers, from the [0004] layer at top to the [0007] series at the base of the midden deposit. Also consistent was the presence of the bones of very young mammals including sheep, goat, cattle, and pig. As observed in 1996-97 these indicators of spring season deposition appear very consistent throughout the stratigraphic sequence. The majority of the mammal bone material consists of the cattle, sheep, and goats documented in earlier reports, and the presence of substantial numbers of pigs of all ages is again demonstrated by the collections. Fish are also well represented, with both salmonid and gadid (cod family) fish present. The gadid bone element distribution again suggests transport in of cured fish, as most head bones are absent. The total bone count for the G deposits (TNF) from 1996-97 was over 20,000 fragments, and we estimate that the amount recovered in 1998 will likely double this figure. It should be possible to treat each major layer within the deposit as a separately quantifiable unit, allowing for fine control on possible changes in patterning.

Botanical Remains

As in 1997, large pieces of carbonized birch wood were recovered from the basal levels of the [0006] series. Several of these must have derived from trees with a 15-20 cm diameter trunk. As in 1997, several pieces of flattened birch bark were recovered from different layers in the midden. One had a rectangular hole near one edge, and Sophia Perdikaris noted an apparent similarity to both archaeological and ethnographic examples from N. Norway of similar pieces of bark being used for roofing shingles. As in prior seasons, large amounts of wood charcoal were recovered from nearly all layers.

Stratigraphic Observations and Interpretation

Three years of work on the fill of unit G, building on research dating back 90 years,

allow some preliminary generalizations about its nature and the sequence of deposition. The fill of the depression of unit G occurred in at least seven major phases.

1) structure is abandoned, artefacts and some structural timber removed (?)
2) slumping and collapse of the walls begins ([0008a], [0008e])
3) sporadic dumping takes place, includes ash ([0008d]) and substantial piles of fire cracked rocks as well as assorted mammal bones.
4) additional weathering of the exposed structure wall deposits additional [0010] wall material over some of the midden deposits
5) additional midden deposits ([0007d]) accumulate, become compacted, and may weather in place for some time.
6) rapid and sustained deposit (with a peak in the spring) of substantial amounts of diverse household garbage, hearth cleaning, and industrial refuse (slag, ironworking debris) accumulate fairly quickly ([0006] series, [0005] series), partially filling the G depression.
7) a widespread sheet midden ([0004]/C4) that is similar in contents but different in distribution from the [0005] and [0006] series deposits contained within G covers most of the surface of G and extends over a large area (with variable thickness).
8) significant human activity on this spot ends well prior to 1104/58, no detectable disturbance prior to 1908.

It would appear that the rate if not the nature of deposition changed at least three times: once between the sporadic midden/wall fall phase of the [0008] series and the more extensive deposit of the [0007] series, again with the acceleration of deposition associated with the [0005] & [0006] context series, and again with the [0004] sheet midden phase. All phases include both 1-3 m- wide lenses of material (including concentrations of fire cracked rocks), and far more extensive spreads of major layers that cover most of the *c.*. 4.5 x 4.5 m G fill area. There is no evidence whatever for in-situ burning or any special function as sacrificial pit (see discussion in Fridriksson, Vesteinsson & McGovern 1998).While some economic change will likely be visible after detailed analysis of the animal bone material, the overall impression is that the bulk of the deposits are created by the same general types of activities. These include primary butchery of animal carcasses and the residue of meals, cleaning of hearths (possibly several different types of hearths), iron smelting and extraction, and probably floor cleaning of dwelling interiors. Absent are extensive deposits of stable cleaning debris or animal dung concentrations so evident in Greenlandic midden deposits. It seems plausible that most of the midden deposits in G were generated by one or more phases of the range of human living rooms and structures to the north.

A major question remaining is the period of time represented by the multiple phases of accumulation in the depression of the G unit. If we assume the pit house at G was built *c.* AD 875-900 and the great hall excavated by Bruun abandoned *c.*. AD 1000-1050, then the probable total period of occupation of this portion of the site may be no more than 125-150 years. As the period of active midden deposit within G must have been only a portion of this time (perhaps less than 50-75 years), it is possible that the stratigraphic sample represented by the excavated midden fill may reflect a very discrete portion of the late 9th to mid 10th century. Further dating evidence may be provided by radiocarbon samples to be submitted for assay this winter, though the time spans involved may well push the limits of precision of radiocarbon assay.

Systematic analysis of the contents of the layers in G and their comparison to other bone-bearing contexts in other parts of the site over the next several years should be of great interest to general investigations of

the nature of early settlement and landuse in Myvatnssveit. Our team feels greatly honored by the kind opportunity provided to excavate and study such an important and perhaps unique deposit.

Acknowledgements

The work carried out in 1998 was generously supported by the Icelandic Science Council, National Geographic Society, the Research Foundation of the City University of New York, and the joint FSÍ/NABO archaeological field school. We would particularly like to thank all the field school students, whose good spirits and hard work made possible the excellent progress seen in the 1998 season.

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6.0 Geoarchaeological Sampling Report

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Introduction

Archaeological investigations at Hofstaðir in 1998 once again included the targeted sampling of soils and sediments for laboratory analyses. Types of samples included undisturbed blocks for micromorphological analysis, as well as undisturbed blocks and bulk samples that may be sub-sampled for a range of supplementary analyses. These supplementary analyses will be selectively pursued based on features observed in the field and in thin section, and may include organic geochemistry, mineralogy and/or the quantification of phytoliths and diatoms. When such work is pursued, it will involve collaboration between the authors and outside specialists.

During the 1998 field season, geoarchaeological sampling focused on occupation and post-occupation deposits within buildings in Areas D and E, midden deposits, soil profiles within the infield, and possible frost-heave features found in test pits on the north-western edge of the site. In addition, reference samples to assist the interpretation of the archaeological samples were collected from a number of sites in the region around Hofstaðir. These included vegetation, turf, peat and animal dung, which will be burnt to create comparative ash samples, as well as floor deposits from the abandoned turf house at Þverá. This sampling strategy fulfilled all of the goals set for the 1998 field season (see the 1997 Geoarchaeological Sampling Report, in A. Friðriksson & O. Vésteinsson 1997a), with the exception of the sampling of the occupation deposits within the sunken floored building in Area G, for which there was insufficient time. The excavation and sampling of the internal deposits in Area G remains a priority for 1999.

Soil and Sediment Sampling At Hofstaðir: Rationale and Procedure

Deposits Within Structures
Area D: Structure D1. 1998 saw the continued excavation of Structure D1, and soil sampling targeted those deposits within the structure that had not been truncated by Daniel Bruun in 1908. It had been discovered in 1997 that post-abandonment fill consisting of turf and mixed soil, as well as sealed occupation deposits, were preserved *in situ* at the northern end and over much of the southern half of Structure D1. A sampling program commenced with the removal of micromorphology and small bulk samples from profiles running east-west (profile A-B) and north-south (profile C-D) at the northern end of the structure (Fig. 6-1). These samples targeted the presumed occupation deposits (contexts 51 and 52), as well as the boundary between them and the natural subsoil/Hekla-3 tephra, since the latter had acted as the original occupation surface. Unfortunately, Bruun's excavation trench reached subsoil in a strip located 2 metres from the northern end of the structure, and for this reason, there is no direct connection between the occupation deposits in the northern quarter of the structure and those in the southern half, which were sampled in 1998.

Context 52, a compact, platy black layer that was suspected to be a floor deposit, was extensively sampled in 1997 (see Table 1). Preliminary observations of context 52 in thin section have confirmed that this layer consisted mainly of decomposed organic material and charcoal, with occasional inclusions of burnt bone, all of

which suggest that domestic cooking refuse had been trampled *in situ*. The thickness of context 52 varied considerably, and it was not continuous, even in the northern end of D1. None of the layers uncovered in the southern half of the structure during the 1998 field season resembled this layer, with the possible exception of context 86, a small, compacted lens on the very southern edge of the structure, which did contain some charcoal (see below). One of the goals of detailed sediment analysis is to determine if the spatial patterning of context 52 is related to the original use of the structure, or if it is a result of post-depositional disturbances, such as truncation or mixing, during subsequent uses of the structure.

Context 51, a soft, pinkish-brown organic silt, capped context 52 and all internal features in the northern end of Structure D1, including post holes, depressions, slot trenches and pits. In thin section, context 51 can be seen to contain a very high proportion of partially decomposed plant matter and phytoliths, the minute silica bodies that are commonly produced within the epidermal cells of plant leaves and stems. Systematic quantification of the types of phytoliths present will improve our understanding of the types of plants and the parts of plants represented in context 51, and to this end several more bulk samples were taken from this layer in 1998 (samples 7, 112, 113, 120). In the southern half of D1, layers very similar to context 51 were found during the 1998 field season. Most notable was context 74, which also capped all other internal layers and features and was the last layer to accumulate prior to the thick deposit of turf and soil debris (context 69) that infills and marks the abandonment of the structure. As a preliminary hypothesis, it is suggested that contexts 51 (in the north end of D1) and 74 (in the southern half) may have been formed by the *in situ* decomposition of hay, and therefore that structure D1 was used for the storage of hay in its final stages, after the furnishings, supporting timbers and hearth stones had been removed.

During the 1998 field season, the south-eastern quarter of D1 was excavated ahead of the south-western quarter in order to expose a profile along the north-south axis of the structure and thereby to facilitate stratigraphic recording and sampling (Fig. 6-2). The bowl-shaped cut that marked the surface of the original sunken floor was deepest in the middle of the building, with the result that at its southern edge, the occupation surface was directly on top of Hekla-3 tephra and dark brown silty subsoil, while in the centre of the structure it appeared to be below the Hekla-3 tephra layer. Alternatively, it is possible that the original surface in the centre of the structure was on the tephra layer, but that the subsoil had been highly compacted and stained by the activities that occurred on top of it, making it unrecognisable at the macroscopic level. In fact, since Icelandic Andisols have very low bulk densities and are therefore highly compressive (Arnalds *et al.* 1995), it is possible that the bowl-like shape of the cut was partly the result of the compaction of sediments in the middle of the structure, which would have been more heavily trampled than the sediments on its edges.

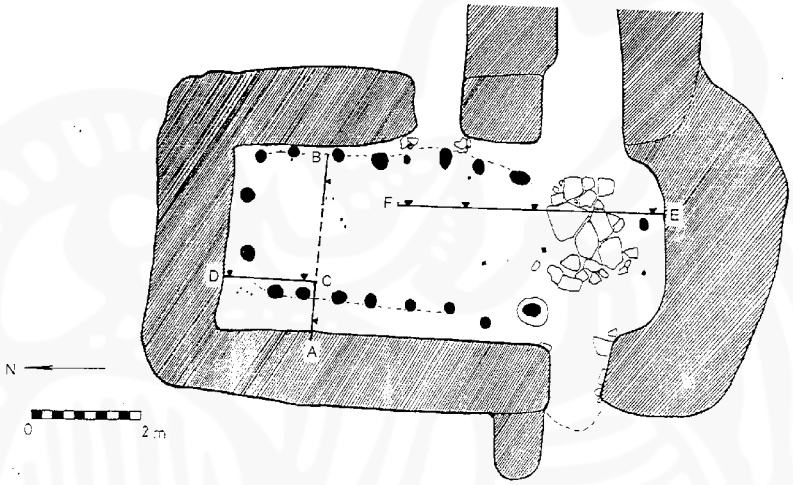
The layers that had accumulated above the original land surface also showed different characteristics in the middle of the building compared to its southern edge. North of the large flagstones, deposits were more compacted and more highly variable, consisting of fine lenses of dark brown clayey silt, small compacted lenses of turf containing the *landnám* tephra, and lenses of reddish-brown and pinkish-white organic material (contexts 74, 78, 79). South of the flagstones, context 74 was very soft and "fluffy" rather than compacted, as was context 84, a peaty, crumbly layer that was associated only with the flag stones. The layer that was most likely to be associated with the original use of the building in its southern end was context 86, which

			Sample Numbers (HST-S-98-x)				
Area	**Structure**	**Sampling Location (letters refer to section drawings)**	**Micromorphology Samples**	**Block Samples for Subsampling**	**Bulk Samples**	**Bulk Sample Location**	**Purpose of Bulk Sample**
D	D1	East-West Profile (A-B)	(1997) Pr. 2/1	(1997) Pr. 2/2	(1997) 1	Context 52 (Micro-layer 2a)	Geochemistry
			(1997) Pr. 3/1		(1997) 2	Context 52 (Micro-layer 2b)	Geochemistry
			(1997) Pr. 3/2		(1997) 3	Context 52 (Micro-layer 2c)	Geochemistry
			(1997) Pr. 3/3		(1997) 4	Context 52 (Micro-layer 2d)	Geochemistry
			(1997) Pr. 3/4		(1997) 5	Context 52 (Micro-layer 2e)	Geochemistry
			(1997) Pr. 3/5		(1997) 6	Context 52 (Micro-layer 2f)	Geochemistry
					(1997) 7	Context 52 (Micro-layer 2g)	Geochemistry
					7	Context 51 (E edge)	Geochemistry Phytoliths
					112	Context 51 (Pit)	Geochemistry Phytoliths
		North-South Profile (C-D)	(1997) Pr. 4/1		(1997) 8	Context 51 (Micro-layer 4)	Geochemistry
			(1997) Pr. 4/2		(1997) 9	Context 52 (Micro-layer 3)	Geochemistry
			(1997) Pr. 4/3		(1997) 10	Context 52 (Micro-layer 3)	Geochemistry
					113	Context 51 (W Edge)	Phytoliths
					120	Context 51 (NW Corner)	Phytoliths
		North-South Profile (E-F)	46	47	27	Context 74	Microrefuse
			48	49	28	Context 74	Geochemistry Phytoliths
			50	51	30	Context 79	Microrefuse
			52	53	33	Context 79	Geochemistry Phytoliths
			54	55			
			56	57			
		'Hearth' Feature (G-H)	35	36	127	Context 76	Mineralogy Ash morphology

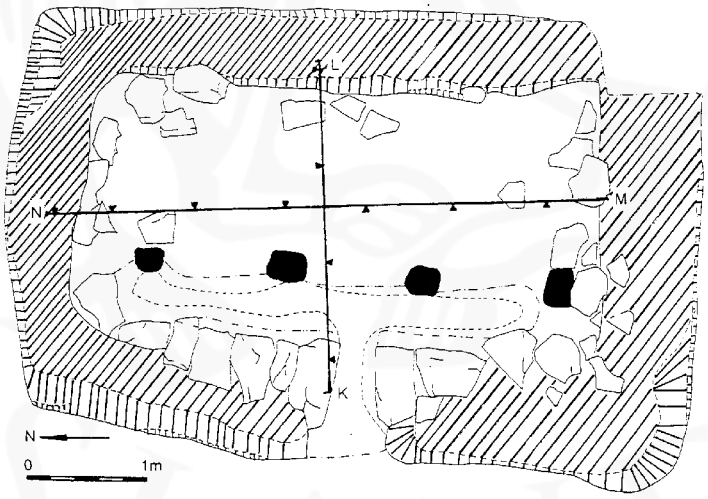
Table 6-1. Summary table of sediment samples from interior deposits in Area D.

Figure 1. Location of sampling profiles in Structures D-1 and E-2.

Structure D-1



Structure E-2



70

consisted of mixed very dark brown and dark grey silts, charcoal flecks, and occasional internal lenses of dark reddish brown organic clayey silt. This layer was very firm and compacted, and appeared to be a floor surface. A similar surface, as yet unexcavated, was exposed within the threshold and corridor in the south-eastern doorway of Structure D1.

Six micromorphology samples for thin section analysis were taken at intervals along profile D-F. The analysis of these thin sections will determine the composition and structure of the original ground surface and the deposits that accumulated above it, and will allow the comparison of these layers at different points along the floor, from the southern edge to the middle of the structure. It is hoped that the analysis of these samples will provide information about the activities that occurred within the structure, as well as any spatial variations in these activities and changes through time.

Area E: Structure E1. Structure E1 was badly truncated in 1908 by Daniel Bruun, who excavated a 1.5 m-wide trench in an east-west direction through the central axis of the building. Internal layers were left intact only along the inner edge of the northern wall and along the inner edge of the southern wall in the very south-eastern corner of the building, and therefore they may not be representative of the layers that once filled the central space of the structure. Nevertheless, it was deemed important to take micromorphology and bulk samples in a few key locations, in order to extract as much information as possible from the sediments that were left, and to increase our ability to interpret the function of the building.

The profile that had already been exposed on the north face of Bruun's Trench E was described and used for the removal of micromorphology sample 42 (profile I-J; Fig. 6-3)). The exposed sediments consisted of a sequence of distinctive layers -- dark brown and grey sandy silts containing small charcoal fragments (contexts 1030, 1096, 1109) and soft pinkish-brown silts that appear to contain fibrous organic material (contexts 1097, 1100, 1106, 1115). The latter sediments closely resemble context 51 in Area D, a layer that has been observed in thin section to contain a high proportion of phytoliths and partially decomposed organic matter. As a preliminary hypothesis, it is suggested that contexts 1097, 1100, 1106 and 1115 were formed at least in part by the *in situ* decay of hay, and therefore that hay was occasionally stored in E1 during its later phases. Verification of this hypothesis must await the results of detailed micromorphological analysis as well as phytolith analysis, for which bulk samples were taken (samples 110 and 103). At the bottom of the sequence exposed in profile I-J is a shallow feature (context 1118), possibly a post hole, which cuts into the *in situ* prehistoric Hverfell tephra layer. This indicates that the original floor surface of this structure was sunken below the 10th-century ground surface.

Since none of the layers observed in profile I-J exhibited the characteristics normally attributed to trampled floors, this sequence may provide little information about the primary function of Structure E1. For this reason, it was deemed necessary to target context 1152, a compacted, dark greyish-brown sandy silt loam that contained frequent small fragments of charcoal and exhibited a platy structure. This context was roughly 1 cm thick, had a maximum extent of 36 cm across, and was restricted to the very west end of Structure E1, so it cannot be assumed that this layer was representative of the internal deposits removed by Bruun. Nevertheless, because context 1152 was the only layer to exhibit the typical characteristics of a primary floor deposit, it was sampled for both micromorphological and geochemical analyses (samples 73 and 98 respectively).

			Sample Numbers (HST-S-98-x)				
Area	**Structure**	**Sampling Location (letters refer to section drawings)**	**Micro-morphology Samples**	**Block Samples for Subsampling**	**Bulk Samples**	**Bulk Sample Location**	**Purpose of Bulk Sample**
E	E1	East-West Profile (I-J)	42		110	Context 1097	Phytoliths
					103	Context 1106	Geochemistry Phytoliths
		'Threshold'	73		98	Context 1152	Geochemistry
		Other			114	Context 1079	Phytoliths
					123	Context 1094	Phytoliths
	E2	East-West Profile (K-L)	61	60	44	Context 1083	Charred turf
			62	63	45	Context 1083	Phytoliths
			64	65	100	Context 1087	Geochemistry Phytoliths
			66				
		North-South Profile (M-N)	67		59	Context 1111 (NW quad.)	Geochemistry Phytoliths
			68	69	96	Context 1111 (SW quart)	Geochemistry Phytoliths
			70	71			
			72				

Table 6-2. Summary table of sediment samples from interior deposits in Area E.

Area E: Structure E2. Deposits within Structure E2 were sealed by context 1083, a layer of regular, largely intact turf debris that may be attributed to the inward collapse of the walls of the structure. The likelihood of finding very well preserved floor layers, coupled with the unusual physical characteristics of the structure (e.g. very large stones facing the inner side of the western wall), prompted the use of a thorough sampling strategy. The structure was excavated in quarters, commencing with the north-eastern and south-western quarters, which maximized the vertical exposure of the floor deposits along two axes (profiles K-L and M-N; Figs. 6-4 and 6-5). This revealed a shallow sequence of deposits above the *in situ landám* tephra layer and above context 1134, a fine horizon of dark brownish-grey silt that contained flecks of charcoal. This latter layer appeared to extend underneath the walls of the structure, and therefore predated it. In addition, it was found that several negative features truncated the prehistoric tephras and context 1134, including a shallow trough running north-south adjacent to the west wall of the structure (feature [1131]), and four large post holes on the eastern edge of the trough.

The trough contained a distinctive yellow organic silt loam, with a very high frequency of fish bone (context 1111) and the subsoil below the cut of the feature appeared to have been stained by material (possibly liquid) from above. Alternatively hypothesised to be a feeding trough or a drain for excrement or other waste, it has not been possible to formulate a satisfactory interpretation of the feature based on its field description alone. Two micromorphology samples (samples 60 and 61) were taken from this feature and the rest of the layer was bulk sampled for wet

sieving, flotation, geochemical and phytolith analyses (59 and 96).

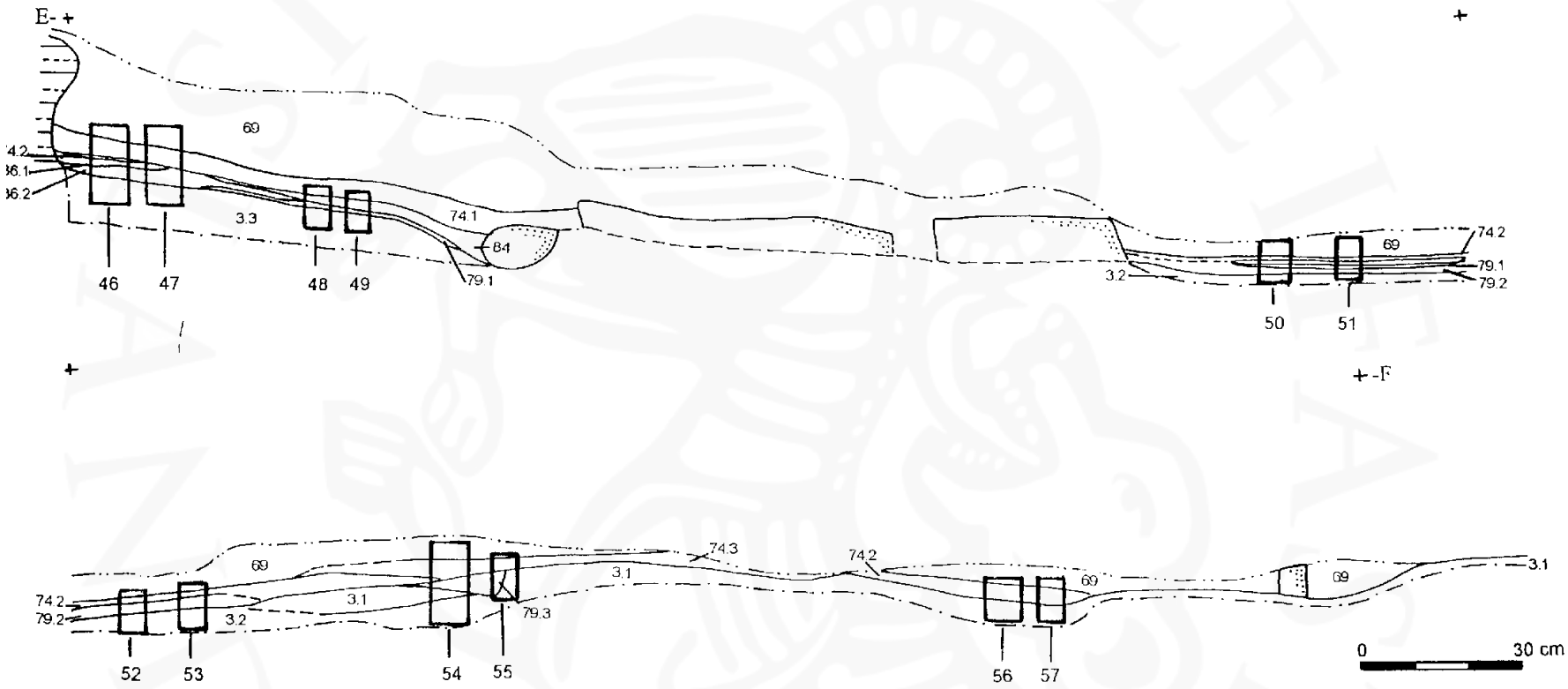
East of the trough-like feature, Structure E2 contained a continuous horizontal sequence of internal deposits. Above the *in situ landám* tephra layer and context 1134 was a heterogeneous layer consisting of mixed brown and yellowish-brown soil, occasional turf fragments and frequent lenses of pinkish-brown clayey silt containing fibrous, organic matter. During excavation, these pinkish-brown lenses appeared to be randomly distributed throughout context 1087, but in section, it was possible to see that they were in fact most highly concentrated in the upper stratum of the deposit. This layer contained occasional bone, wood fragments and charcoal, with the latter two concentrated in the north-east quarter of the structure. Because context 1087 represented the only internal deposit that could be associated with the life of E2 and therefore played a key role in the understanding of the function of the structure, it was thoroughly sampled to extract as much information from it as possible. Eight micromorphology samples for thin section analysis were taken, in addition to five undisturbed blocks for sub-sampling in case this should prove necessary based on the features visible in thin section (samples 60-72). Because the pinkish-brown clayey silt lenses seemed to contain fibrous organic matter similar to context 51 in Area D, a bulk sample was also taken for detailed phytolith analysis (sample 100). These samples will provide information about the composition of context 1087, and it is hoped that they will clarify the original function of the structure.

Midden Deposits: Area G

Previous analyses of the Area G deposits using sediment thin section micromorphology to test competing hypotheses of site formation processes has resulted in a paper accepted by *Geoarchaeology* (Simpson et al., accepted). Analyses of the basal deposits lends support to the recent proposal that the great pit, thought to be constructed either for cooking or for refuse disposal, actually originated as a sunken hut (Friðriksson and Vésteinsson, 1997b). Immediately above the subsoil is a sequence of fine, compacted, layers containing high concentrations of charcoal and burnt bone, which have been interpreted as trampled occupation surfaces belonging to a sunken floored dwelling. Following the abandonment of the structure, these floors seem to have been sealed by collapsed turf roof and / or wall material. The open pit created by the structural collapse of this house was then used for dumping domestic rubbish generated elsewhere on the farmstead. Materials deposited include a range of food debris, birch charcoal and peat ash, and wall / roof turf material from different sources. There is also evidence to suggest a changing emphasis in food and fuel resources as the deposits accumulated, although faunal and botanical analyses must be completed to confirm these trends. Such observations are inconsistent with a cooking pit and feasting hypothesis, but are entirely consistent with waste deposition from a domestic farm dwelling exploiting a range of different environmental resources.

These analyses demonstrated that fuel ash forms a major component of the accumulated debris in Area G, thus opening the possibility of a detailed study of fuel resource utilisation associated with the site. During the 1998 field season midden deposits from Area G were systematically and strategically sampled with the purpose of answering the following questions: What material was used as fuel and how did this change as the midden accumulated? Which fuel types may have been used for smithying or smelting; which fuel types may have been used for domestic cooking and space heating? Was the accumulation of midden deposits continuous, or were there standstill phases? It is proposed that these questions will be addressed through the application of thin section

Figure 2. Area D, Structure D-1, Profile E-F



Sediment Descriptions (interpretations are in *italics*)

69 Mainly 7.5 YR 2.5/3 very dark brown silt loam mixed with 7.5 YR 4/6 strong brown and 5 YR 3/4 dark reddish brown silt; firm and friable; *mixed turf and soil below Bruun's 1908 truncation.*

74.1 5 YR 3/3 dark reddish brown clayey silt with a high organic content and occasional fine internal lenses of pinkish white fibrous organic material; soft and friable; *post-occupation deposit; possibly decomposed hay.*

74.2 As above, but firm and compacted.

74.3 10 YR 2/2 very dark brown clayey silt with a high organic content

78 7.5 YR 2.5/2 very dark brown clayey silt, with occasional lenses of *landnám* tephra and lenses of 5 YR 3/3 dark reddish brown clayey silt with a high organic component; firm and friable; *occupation deposit.*

79.1 5 YR 3/3 dark reddish brown clayey silt with a high organic content, and fine internal lenses of pinkish white organic material; firm and compacted; *occupation deposit.*

79.2 Mixed 5 YR 3/3 dark reddish brown clayey silt with high organic content and 7.5 YR 2.5/2 very dark brown clayey silt; firm, compacted; *occupation deposit.*

79.3 Very mixed 10 YR 2/2 very dark brown silt with high organic content, Hekla-3 tephra, and charcoal; firm, friable; *fill of shallow pit or post hole.*

84 2.5 YR 2.5/2 very dusky red silt with very high organic content (peaty); crumbly.

86.1 7.5 YR 2.5/2 very dark brown silt, mixed with very dark grey silt and charcoal flecks; friable, firm, compacted; *occupation deposit.*

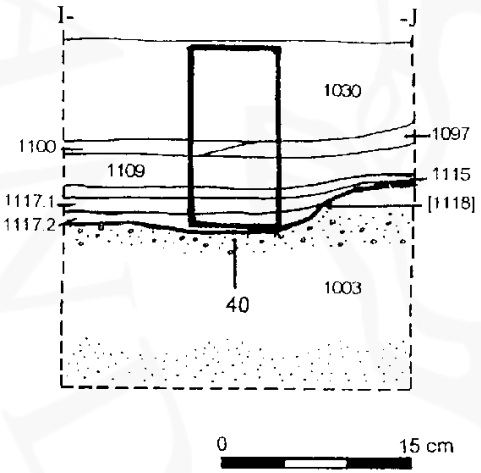
86.2 7.5 YR 2.5/3 very dark brown silt, with occasional internal lenses of 5 YR 3/3 dark reddish brown clayey silt with high organic content; firm, friable; *occupation deposit.*

3.1 7.5 YR 3/3 dark brown silt; *subsoil.*

3.2 7.5 YR 3/3 sandy silt; *possibly tephra.*

3.3 7.5 YR 2.5/3 clayey silt, with Hekla-3 tephra; *subsoil.*

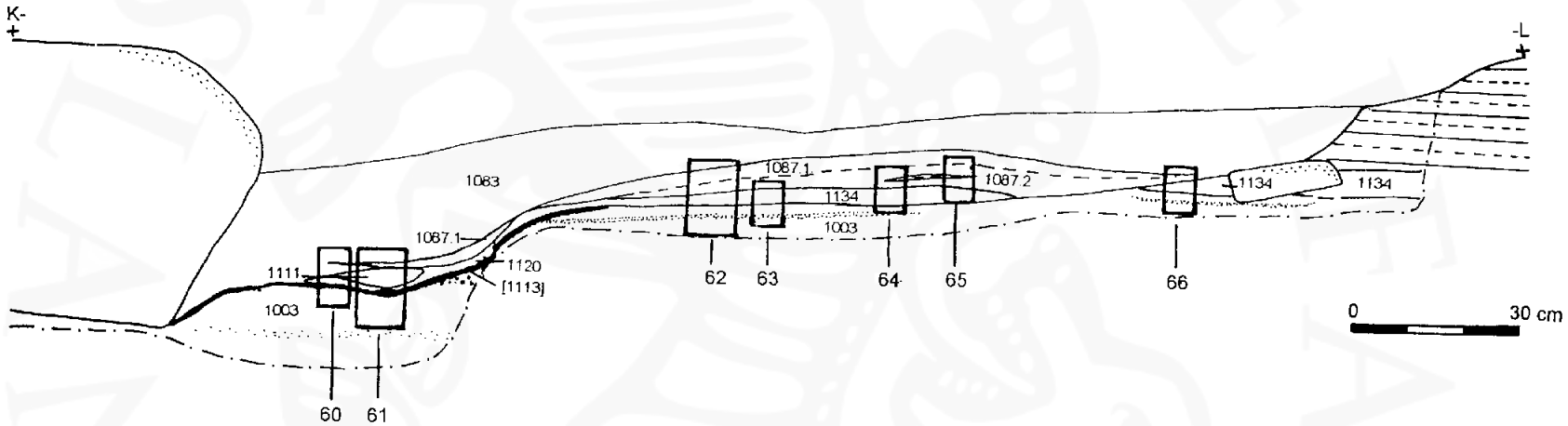
Figure 3. Area E, Structure E-1, Profile I-J.



Sediment Descriptions (interpretations are in *italics*)

1030	Mixed 7.5 YR 2.5/2 very dark brown and grey sandy silt with rare charcoal flecks, bone fragments and small rounded stones; firm and friable; *post-abandonment fill.*
1097	7.5 YR 4/3 pinkish brown silt with a high organic content (fibrous); soft; *possibly decomposed hay.*
1100	5 YR 3/4 dark reddish brown silt with a high organic content; soft; *possibly decomposed hay.*
1109	Mixed 7.5 YR 2.5/2 very dark brown and grey sandy silt with rare charcoal flecks.
1115	7.5 YR 4/4 pale pinkish brown silt with a high organic content; soft; *possibly decomposed hay.*
1117.1	Mixed 7.5 YR 2.5/2 very dark brown and grey silt loam; *fill of post hole [1118]*
1117.2	7.5 YR 4/3 pinkish brown silt with a high organic content (fibrous); soft; *fill of post hole [1118]*
1003	*Subsoil and prehistoric tephras (Hverfell and Hekla-3).*

Figure 4. Area E, Structure E-2, Profile K-L.



Sediment Descriptions (interpretations are in *italics*)

1083	Mixed, multi-coloured turf (red and black charred turf, green and brown turf containing the *landnám* tephra), yellowish brown soil and lenses of pinkish brown clayey silt with high organic content; friable; occasional bones, with a higher concentration of articulated bones within the western entrance; *turf wall collapse.*
1087.1	Lenses of pinkish brown clayey silt with high organic content (7.5 YR 3/4 dark brown and 7.5 YR 4/4 brown), with mixed brown and yellowish brown soil and occasional turf fragments; friable; *post-occupation deposit; possibly decomposed hay.*
1087.2	As above, but lens dominated by mixed brown soil and occasional turf fragments, with fewer pinkish brown lenses; *occupation and/or post-occupation deposit.*
1111	Yellowish brown clayey silt with high organic content (10 YR 5/6), with occasional internal lenses of whitish fibrous organic material; firm; abundant fine bone fragments; *fill of trough-like feature [1131].*
1120	Pale greyish brown and yellowish brown silt (in section it appeared to be 7.5 YR 2.5/3 very dark brown); soft; with lenses of coarse grey sand; *lower fill of trough-like feature [1131].*
1134	Black and dark brownish grey silt (7.5 YR 2.5/1) with *c.* 10% charcoal flecks; part of *sheet midden deposit (1004) that pre-dates Structures E-1 and E-2.*
1003	*Subsoil and tephra layers.*

micromorphology analyses of the midden deposits, with observations interpreted through the micromorphological analyses of ash residues derived from experimental burning.

Site stratigraphy and sampling. The midden deposits of Area G comprise of finely stratified deposits which slope towards the centre of the pit. The deposits have a range of colours from very dark grey (10YR 3/1) to dark yellowish brown (10 YR 4/4), and hand textures are predominantly silt to silt loam. Inclusions of bone and charcoal of a range of sizes are evident throughout the stratigraphy. Samples for thin section micromorphological analyses were collected as follows: Six undisturbed samples were collected from section G108 in the centre of the pit and covered contexts 5a, 6d, 6o, 6f, 6m, 7b, 7a, and 8; to assess variability within the stratigraphy, a further five undisturbed samples were collected from section G108, towards the edge of the pit and covered contexts 5a, 6d, 6o, 6g, 6f, 6n, 6m, and 7c. Three undisturbed large monolith samples were also collected from section G 106a, covering contexts 5a, 6d, 6g, 6o, 6p, and 6f. Bulk samples were also collected from each of the stratigraphic contexts for which there was an undisturbed sample for thin section micromorphological analyses. These samples represent the range of stratigraphy evident in the midden deposits. To more fully represent the ash deposits across the site as a whole, a thin section sample of peat ash deposits has been collected from Area E.

Fuel sources and burning experiments. As a way of assisting with the interpretation of features observed in thin section from the midden deposits, a series of burning experiments on traditional Icelandic fuel materials has been undertaken with the derived ash currently being made into thin sections. Historical data from Iceland (Vésteinsson, pers comm) suggests that utilisation of fuel resources varied over time, but with a general order of importance as follows: peat (mór - svörður); sheep dung (sauðatad); driftwood (rekaviður); birch (birki); willow and other shrubs (hrís); cow dung (kúmykja); turf (torf); seaweed - also burnt for salt (þang); charcoal from birch (vidarkol - primarily used for smithying). Contemporary samples of each of these materials have been obtained from around Hofstaðir: two samples of turf have been obtained from the wet slope to the west of the site (*Eriophorum* dominated - Domin value 7; *Geum* dominated - Domin value 5), with a further turf obtained from the drier sloping area to the west of the site (*Betula nana* dominated - Domin value 7); peat has been obtained from a local peat bank (dominants to be determined); sheep dung and cattle dung came from farms in the vincinity of Mývatn; willow and birch shrub was obtained from the dry slope to the west of the site, with birch wood obtained from approximately a kilometre north in the Laxá valley; seaweed (þang) and drift wood were obtained from the coast at Húsavík. Burning of these materials has already taken place using a muffle furnace with an oxidising environment for one hour. Two temperatures of 400^0C and 800^0C have been used to reflect domestic fires used for space heating and cooking, and for smithying respectively (Canti, pers comm). Ash materials produced by this process are currently being manufactured as thin sections for detailed microscopic investigation. Preliminary results suggest that there are marked variations in birefringence fabrics and in mineral characteristics observed under oblique incident light between the different materials burnt, opening the possibility that it may be possible to differentiate between different fuel ash deposits in the Area G midden.

			Sample Numbers (HST-S-98-xx)			
Area	**Type of Deposit**	**Context Number**	**Micromorphology Samples**	**Bulk Samples**	**Purpose of Bulk Sample**	**Responsible Institution**
D	Peat Ash	68		105	Mineralogy Ash morphology	Cambridge
E	Peat Ash	1057	23	22	Mineralogy Ash morphology	Stirling
				115	Mineralogy Ash morphology	Cambridge
		1063		88	Mineralogy Ash morphology	Cambridge
		1066		85	Mineralogy Ash morphology	Cambridge
		1156		87	Mineralogy Ash morphology	Cambridge
G	Midden	108a/5a-6d	6	129	Particle size	Stirling
		108a/6d-6o	5	130	Particle size	Stirling
		108a/6o-6f	4	131	Particle size	Stirling
		108a/6f-7b	3	132	Particle size	Stirling
		108a/7b	2	133	Particle size	Stirling
		108a/7a-8	1	134	Particle size	Stirling
		108b/5a	5	135	Particle size	Stirling
		108b/6d-6o	4	136	Particle size	Stirling
		108b/6g-6f	3	137	Particle size	Stirling
		108b/6f-6n	2	138	Particle size	Stirling
		108b/7c-8	1	139	Particle size	Stirling
		106a/5a	2/1	140		Stirling
		106a/6d,6g, 6o	2/2	141		Stirling
		106a/6o,6p, 6f	2/3	142		Stirling

Table 6-3. Summary table of sediment samples from midden deposits.

Soil Profiles within the Infield

Soils of the infield area were examined to assess evidence of cultivation and manuring practice. Two soil profiles were exposed to the thick pre-historic H3 tephra layer approximately 60 m and 50 m south west of Area G. No field evidence of cultivation practice was found, but the frequent occurrence of charcoal within the stratigraphy suggests that waste materials from the site were used to amend soils, probably as a means of maintaining or enhancing soil fertility for grass production. Three undisturbed samples were collected from one profile to further assess the evidence for cultivation and manuring practice using thin section micromorphology. Of some significance is the close juxtapositioning of *Landnám* and 1104/58 tephra in the stratigraphy of the profile closest to the site. This observation suggests that turves have been stripped from this area during the period of site formation and may have been used for construction purposes or for fuel.

Possible Frost-Heave Features

Several test pits opened in the north-western corner of the site in 1997 revealed unusual features that are possibly attributable to frost heave. These features

consisted of irregular pieces of turf containing the *landnám* and prehistoric tephras, which were oriented vertically, thereby creating irregular wave-like patterns when viewed in section and a rough honey-comb pattern when viewed in plan. Between the pieces of turf, and capping them, was a light yellowish brown silt, above which was the *in situ*, thick grey tephra thought to date to *c.* 1480. These features were exposed again in 1998 in the western edge of Area E, and one micromorphology sample (sample 41) was removed from an exposed section face. In order to help determine whether these features were indeed the result of frost heave, this sample will be examined for structural characteristics that are typical of soils subjected to freeze-thaw processes.

Floor Deposits Collected from Þverá

Þverá, an abandoned turf farmhouse that is about 14 km north of Hofstaðir and is also in the Laxádalur, was the subject of a pilot study in 1997. It was found that the farmer who had been born in the house and had lived there for over 20 years (Áskell Jónasson) could provide a substantial amount of information about the activities and living conditions associated with different rooms, and that there had been limited disturbance of the original floors of the house since its abandonment in 1960. Floor deposits in the kitchen (Area A) and the byre (Area B) were found to be well preserved, and these were sampled for micromorphological and bulk chemistry analyses in order to provide a modern analogue for the occupation deposits under excavation at Hofstaðir.

During the 1998 field season, the sampling program at Þverá was intensified in order to obtain comparable material from all of the main rooms and corridors in the house. This involved the excavation of shallow test trenches, the recording of stratigraphy using scale drawings and photographs of exposed sections, and the removal of small quantities of earthen material (Table 6-4). In all cases the test pits were backfilled as soon as the samples were removed. In addition to the occupation deposits within the house, turf samples were taken from an area immediately downslope of the farmhouse, where turf had recently been cut and stacked for use in the repair of other structures on the farmstead. Since many floors in the house had been covered with turf to provide a clean surface, thin sections of the fresh turf samples collected in 1998 will act as a control for the assessment of the structural changes that take place when turf is used as a flooring material.

Area B: Byre

In 1997, samples were removed along an east-west axis that covered the feeding bench, the sediment below the floorboards in the stalls, the drain, and the compacted earthen floor immediately west of the drain. However, it had proved impossible to obtain a micromorphology sample of this compacted sediment. One of the goals of the 1998 field season was to obtain a series of micromorphology samples from the earthen floor within the byre in order to determine whether or not the movement of cattle over the floor left any distinctive traces in the sediment. A trench was placed across the threshold of the byre (G-H), which exposed the fresh turf flooring (layers 1-5) and a black, compacted, gritty layer with internal lensing that would appear to be the original floor surface (layer 6). Below this compacted layer was a light-coloured, soft silty layer that would also seem to be associated with the use of the doorway, since it was restricted to its very centre and was thickest in the middle (layer 8). However, both layers 6 and 8 are stratigraphically below the stone wall on the eastern edge of the threshold, and further enquiries must be made to determine if this wall has been altered in any way since the byre was in use. Five micromorphology samples and two bulk samples were removed from this profile.

		Sample Numbers (ÞVR-98-xx)		
Area	**Sampling Location (letters refer to section drawings and the house plan)**	**Micromorphology Samples**	**Bulk Samples**	**Bulk Sample Location**
B: Byre	Threshold (G-H)	14 15 16 17 18	19 20 21 22	Layer 3 Layer 3 Layer 6 Layer 8
	Interior (I-J)	23	24 25	Layer 1 Layer 2
	Interior (Spot Samples)		35 36 37	
C: Fuel Store	West Wall to Centre (K-L)	01 02 03	04 05	Layer 3 Layer 2
D: Main Corridor	Cross-Section (M-N)	06 07	08 09	Layer 2 Layer 4
E: Bedroom	Below Floorboards (O-P)	10 11 12	13	Layer 1
F: Pantry	North of Partition (Q-R)	26 27	28 29	Layer 2 Layer 3
	South of Partition (S-T)	30 31	32 33	Layer 3 Layer 3
G: Smithy	Adjacent to Forge (U-V)	34		

Table 6-4. Summary table of soil samples and sampling locations at Þverá.

A small trench was also excavated in the earthen floor within the byre (I-J), where the original floor surface was represented by a very compacted, black organic clayey silt with a distinctive platy structure (layer 2). One micromorphology sample and two bulk samples were removed from this trench, in addition to three spot samples from elsewhere in the byre.

C: Fuel Store

The sampling program carried out in the kitchen of the farmhouse in 1997 did not include the space north of the hearths, where fuel used to be stored, including sheep dung, peat and brushwood (Áskell Jónasson, pers. comm.). In 1998, a sampling trench was opened between the middle of this room and its western wall (K-L). While there were no noticeably compacted layers, the layer below the fresh turf consisted of a black, organic silt. Three micromorphology samples and two bulk samples were taken.

D: Main Corridor

The main east-west corridor in the house was sampled in order to compare the form and extent of compaction by human trampling with that on the threshold of the cattle byre. Also, since the passage is too low and narrow for any activity other than walking, which means that material deposited on the floor originated from other areas inside or outside of the house, it offered an ideal location to assess the degree to which charcoal and ash from the kitchen (found in 1997; see the 1997 Geoarchaeological Sampling Report, in A. Friðriksson & O. Vésteinsson 1997a) and soil from the outdoors were unwittingly carried through the interior. The sediments

in this area were extremely compact, and the trench that was cut across the passage (M-N) revealed a series of black, organic layers that ran down the centre of the corridor (layers 2 and 4). In comparison, the sediments on the edges of the corridor, which are adjacent to the stone walls and therefore never walked upon, were homogeneous and relatively loose. Micromorphology samples were taken from the centre and the edge of the passage, and the black, organic layers in the centre of the passage were targeted for bulk samples.

E: Bedroom

The bedrooms and front parlours of the farmhouse were floored with suspended wooden boards. The carpentry in the parlours was of superior quality, with the result that the joints between the floorboards were less than 1mm thick and were often only a hair's breadth. In the bedrooms, cracks between the floorboards were considerably wider, with most being about 1mm wide and some reaching 2mm. During the occupation of the house, floor boards were cleaned by scrubbing them with sand (Áskell Jónasson, pers. comm.), and it is to be expected that this sand, as well as other debris, would experience some degree of sorting as it sifted below the boards. The owner of the house lifted three floor boards within the southernmost bedroom, adjacent to the doorway, to enable sampling of the sediments below. Below an air pocket of about 12cm, a layer of extremely loose, dark greyish-brown sand had accumulated (layer 1). Three micromorphology samples were taken, and layer 1 was bulk sampled for particle-size analysis to determine the degree of sorting.

F: Pantry

The pantry was sampled in order to provide a comparison between areas of food storage and areas of food preparation and consumption (i.e., the kitchen). Although the pantry is now one large room, it was once divided by a partition wall running east-west, the foundations of which are still visible. Sampling trenches were excavated along a north-south axis on both sides of the partition wall in order to determine if it would be possible to detect any minor differences in the use of these rooms (profiles Q-R and S-T). In both trenches, the uppermost, fresh turf layers were lying over a compacted, sandy layer (layer 3 in both cases). Two micromorphology samples and two bulk samples were taken from each trench.

G: Smithy

Adjacent to the main farmhouse is a small smithy, which was sampled in order to determine whether, in the absence of large amounts of slag, metalworking activities could still be distinguished in the floor sediments. The short trench that was excavated immediately to the west of the stone forge (U-V) contained thick organic layers, and one sandy silt layer, but otherwise no clearly discernible work surface. One micromorphology sample was removed.

Methods for Processing and Analysis of Samples

The micromorphology samples will be manufactured and analysed at the Universities of Cambridge and Stirling. They will be dried using acetone replacement of water, impregnated with a crystic polyester resin, and thin sectioned following the method outlined by Murphy (1986), a process that normally takes three to five months. The sections will then be analysed under a transmitting light microscope using a range of light sources (plane polarised, cross polarised, circular polarised, reflected and ultra violet light) at magnifications ranging from x4-x400. Digital image capture and analysis techniques will be used to quantify certain characteristics at the University of Stirling, and all thin section descriptions will conform to internationally accepted terminology (Bullock *et al.* 1985). In thin section, it will be possible to identify and

quantify the mineralogy, structure and texture of the soils and sediments, as well as any bones, shells, artefacts, coprolites, phytoliths, diatoms, ash crystals, pollen, charcoal and plant remains that are present. In addition, it will be possible to observe the presence and degree of mobility of iron, manganese, phosphorous, carbonates, and clay minerals, which can be linked to specific environmental conditions acting on soils with certain chemical properties. The interpretation of the thin sections will be aided by reference to the experimental and ethnoarchaeological materials collected by the authors and other researchers, and will benefit from the accumulated experience of a number of workers who have applied micromorphology to archaeological material in the past (e.g. Courty *et al*. 1989).

Conclusion and Proposal for Future Work

Through the application of thin section micromorphology and supporting analytical techniques, geoarchaeological investigations at Hofstaðir are beginning to make significant advances in the interpretation of activity surfaces within the site and in the utilisation of fuel resources by the occupants of the site. By combining ethno-archaeological and experimental approaches to provide well defined control samples, high definition interpretation of thin sections from the Hofstaðir site is being achieved. Substantial geoarchaeological investigation reamins to be undertaken on the site, noteably the sampling of activity surfaces at the base of Area G and from the long house. Sampling from these localities on the site will ensure the most comprehensive set of activity surface horizons from any settlement site in the North Atlantic region.

Acknowledgements

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Appendix 1: List of Finds

Find No	*Area*	*Context*	*General Name*	*No.*	*Material (Basic/Detail)*	
98-121	G	0004a	Staple /	1	Metal	Fe-Iron
98-122	G	0006g	Bead / Perla	1	Glass?	Unknown
98-123	G	0006d	Crumbs / Brot	1	Ceramic?	Unknown
98-124	G	0006d	Needle / Nál	1	Bone	Unknown
98-125	E	1002	Whetstone / Brýni	1	Stone	
98-126	E	1083	Nail / Nagli	1	Metal	Fe-Iron
98-127	D	0015	Pin / Pinni	1	Metal	Fe-Iron
98-128	D	0016	Object / Hlutur	1	Metal	Fe-Iron
98-129	D	0016	Nail / Nagli	1	Metal	Fe-Iron
98-130	D	0016	Object / Hlutur	1	Metal	Fe-Iron
98-131	G	0006o	Object / Hlutur	1	Stone	
98-132	G	0006d	Nail / Nagli	1	Metal	Fe-Iron
98-133	G	0006m	Object / Hlutur	1	Metal	Cu-Bronze
98-134	G	0005a	Pin / Pinni	1	Bone	
98-135	G	0006m	Belt buckle / Sylgja	1	Metal	Fe-Iron
98-136	G	0006f	Button / Hnappur	1	Other	Amber
98-137	G	0007b	Stud / Bóla	1	Metal	Cu-Bronze
98-138	G	U/S	Object / Hlutur	1	Metal	Fe-Iron
98-139	G	0007b	Spike / Gaddur	1	Metal	Fe-Iron
98-140	G	0006a	Object / Hlutur	1	Other	
98-141	G	0006f	Knife / Hnífur	1	Metal	Fe-Iron
98-142	A	0001	Object / Hlutur	1	Metal	Fe-Iron
98-143	G	0006n	Spindle whorl /	1	Stone	
98-144	G	0006q	Object / Hlutur	1	Stone	
98-145	G	0007d	Object / Hlutur	1	Metal	Fe-Iron
98-146	G	0004a	Object / Hlutur	1	Metal	Fe-Iron
98-147	A	0001	Pottery sherd / Leirkersbrot	1	Ceramic	
98-148	E	1057	Object / Hlutur	1	Metal	Cu-alloy
98-149	D	0066	Nail / Nagli	1	Metal	Fe-Iron
98-150	D	0062	Slag / Gjall	3	Other	Unknown
98-151	E	U/S	Object / Hlutur	1	Metal	Fe-Iron
98-152	E	1063	Knifeblade / Hnífsblað	1	Metal	Fe-Iron
98-153	E	1063	Object / Hlutur	1	Metal	Fe-Iron
98-154	G	0005a	Nail / Nagli	1	Metal	Fe-Iron
98-155	G	0008b	Object / Hlutur	2	Metal	Fe-Iron
98-156	G	0006d	Knifeblade / Hnífsblað	1	Metal	Fe-Iron
98-157	G	0006x	Object / Hlutur	1	Metal	Fe-Iron
98-158	G	0005a	Nail / Nagli	1	Metal	Fe-Iron
98-159	G	0006d	Nail / Nagli	1	Metal	Fe-Iron
98-160	G	0005b	Nail / Nagli	1	Metal	Fe-Iron
98-161	G	0006f	Nail / Nagli	3	Metal	Fe-Iron
98-162	G	0005f	Object / Hlutur	2	Metal	Fe-Iron
98-163	G	0007d	Object / Hlutur	1	Metal	Fe-Iron
98-164	G	0007b	Object / Hlutur	1	Metal	Fe-Iron
98-165	G	0006m	Nail / Nagli	1	Metal	Fe-Iron
98-166	G	0004	Object / Hlutur	1	Metal	Fe-Iron
98-167	G	0004	Nail / Nagli	1	Metal	Fe-Iron
98-168	A	0100	Fragment / Glerbrot	1	Glass	

98-169	G	0006o	Object / Hlutur	3	Metal	Fe-Iron
98-170	G	0006w	Object / Hlutur	8	Metal	Fe-Iron
98-171	G	U/S	Object / Hlutur	3	Metal	Fe-Iron
98-172	G	0006h	Slag / Gjall	2	Other	
98-173	G	0007d	Object / Hlutur	1	Metal	Fe-Iron
98-174	G	0005b	Object / Hlutur	1	Metal	Fe-Iron
98-175	G	0006d	Slag / Gjall	14	Other	
98-176	A	0100	Object / Hlutur	2	Metal	Fe-Iron
98-177	G	0006x	Nail / Nagli	1	Metal	Fe-Iron
98-178	G	U/S	Object / Hlutur	1	Metal	Fe-Iron
98-179	G	0006g	Nail / Nagli	1	Metal	Fe-Iron
98-180	G	0007d	Nail / Nagli	1	Metal	Fe-Iron
98-181	G	0006d	Nail / Nagli	1	Metal	Fe-Iron
98-182	G	0005a	Whetstone / Brýni	2	Stone	
98-183	A	0016	Whetstone / Brýni	1	Stone	
98-184	G	0004	Object / Hlutur	1	Metal	Fe-Iron
98-185	A	0016	Object / Hlutur	1	Stone	
98-186	G	0006d	Nail / Nagli	1	Metal	Fe-Iron
98-187	G	0006n	Object / Hlutur	2	Metal	Fe-Iron
98-188	G	0006d	Object / Hlutur	1	Metal	Fe-Iron
98-189	G	0005a	Object / Hlutur	9	Metal	Fe-Iron
98-190	A	0106	Flake / Flaga	1	Stone	Obsidian
98-191	G	0007d	Object / Hlutur	1	Metal	Fe-Iron
98-192	G	0006d	Slag / Gjall ?	1	Other	
98-193	G	0006d	Object / Hlutur	1	Metal	Fe-Iron
98-194	G	0005a	Slag / Gjall	1	Other	
98-195	G	0007b	Nail / Nagli	1	Metal	Fe-Iron
98-196	G	0006d	Object / Hlutur	1	Metal	Fe-Iron
98-197	G	U/S	Object / Hlutur	1	Stone	
98-198	G	0006d	Object / Hlutur	3	Metal	Fe-Iron
98-199	G	0007d	Object / Hlutur	1	Metal	Fe-Iron
98-200	A	0100	Whetstone / Brýni	1	Stone	
98-201	E	1111	Object / Hlutur	1	Metal	Fe-Iron
98-202	G	0006n	Object / Hlutur	1	Metal	Fe-Iron
98-203	G	0006n	Nail / Nagli	1	Metal	Fe-Iron
98-204	G	0005a	Object / Hlutur	3	Metal	Fe-Iron
98-205	G	0006d	Whetstone / Brýni	1	Stone	
98-206	G	0008c	Object / Hlutur	1	Stone	
98-207	G	0005a	Object / Hlutur	1	Metal	Fe-Iron
98-208	G	0005a	Object / Hlutur	3	Metal	Fe-Iron
98-209	G	0006d	Object / Hlutur	1	Other	Amber
98-210	G	0005a	Object / Hlutur	1	Metal	Fe-Iron
98-211	G	0005a	Object / Hlutur	1	Metal	Fe-Iron
98-212	G	0006a	Object / Hlutur	1	Metal	Fe-Iron
98-213	G	0006n	Slag / Gjall	1	Other	
98-214	G	0006w	Object / Hlutur	1	Metal	Fe-Iron
98-215	G	0006o	Object / Hlutur	3	Stone	
98-216	G	0006h	Slag / Gjall	1	Other	
98-217	G	U/S	Object / Hlutur	1	Metal	Fe-Iron
98-218	G	0004	Object / Hlutur	1	Bone	
98-219	E	1066	Spindle whorl /	1	Stone	

98-220	G	0005a	Knifeblade / Hnífsblað	1	Metal	Fe-Iron
98-221	G	0006d	Whetstone / Brýni	1	Stone	
98-222	E	1136	Pin / Pinni	1	Bone	
98-223	G	0006f	Slag / Gjall	4	Other	
98-224	E	1066	Spindle whorl /	1	Stone	
98-225	G	0006o	Slag / Gjall	1	Other	
98-226	A	0106	Clip / Spenna	1	Metal	Fe-Iron
98-227	A	0115	Pottery sherd / Leirkersbrot	3	Ceramic	Whiteware
98-228	A	0106	Clip / Spenna	1	Metal	Cu-alloy
98-229	G	0004	Slag / Gjall	3	Other	
98-230	G	0004	Fragment / Bútur	3	Metal	Fe-Iron
98-231	G	0006hk	Slag / Gjall	1	Other	
98-232	G	0006m	Slag / Gjall ?	2	Other	
98-233	G	0006d	Slag / Gjall	2	Other	
98-234	G	0006n	Slag / Gjall	1	Other	
98-235	G	0005a	Pottery sherd / Leirkersbrot	1	Ceramic	Whiteware
98-236	D	0062	Loom weight / Kljásteinn	1	Stone	
98-237	G	0008c	Decorative object / Skraut	1	Stone	Quartz?
98-238	G	0006f	Nail / Nagli	1	Metal	Fe-Iron
98-239	E	1144	Nail / Nagli	1	Metal	Fe-Iron
98-240	E	1144	Nail / Nagli	1	Metal	Fe-Iron
98-241	D	0066	Slag / Gjall	1	Other	
98-242	G	0008d	Nail / Nagli ?	1	Metal	Fe-Iron
98-243	G	0008d	Slag / Gjall	1	Other	
98-244	G	0007a	Fragment / Bútur	1	Metal	Fe-Iron
98-245	G	0005a	Slag / Gjall ?	1	Other	
98-246	E	1144	Fragment / Bútur	2	Metal	Fe-Iron
98-247	E	1156	Knifeblade / Hnífsblað ?	1	Metal	Fe-Iron
98-248	E	1138	Fragment / Bútur	1	Metal	Fe-Iron
98-249	E	1138	Strip / Ræma	1	Metal	Fe-Iron
98-250	G	0006o	Slag / Gjall	7	Other	
98-251	G	0006f	Slag / Gjall ?	5	Other	
98-252	G	0008b	Slag / Gjall	5	Other	
98-253	A	0100	Knife handle / Hnífsskaft	1	Composite	Fe-Iron / Wood
98-254	A	0107	Fragment / Glerbrot	3	Glass	Window
98-255	A	0109	Strip / Ræma	1	Metal	Fe-Iron
98-256	A	0105	Pottery sherd / Leirkersbrot	1	Ceramic	Whiteware
98-257	A	0001	Pottery sherd / Leirkersbrot	4	ceramic	Whiteware
98-258	A	0107	Whetstone / Brýni	1	Stone	
98-259	A	0100	Bottles / Flöskur	2	Glass	Vessel
98-260	A	0100	Pottery sherd / Leirkersbrot	9	Ceramic	Whiteware
98-261	A	0107	Pottery sherd / Leirkersbrot	14	Ceramic	Whiteware
98-262	A	0107	Fragment / Bútur	4	Metal	Fe-Iron

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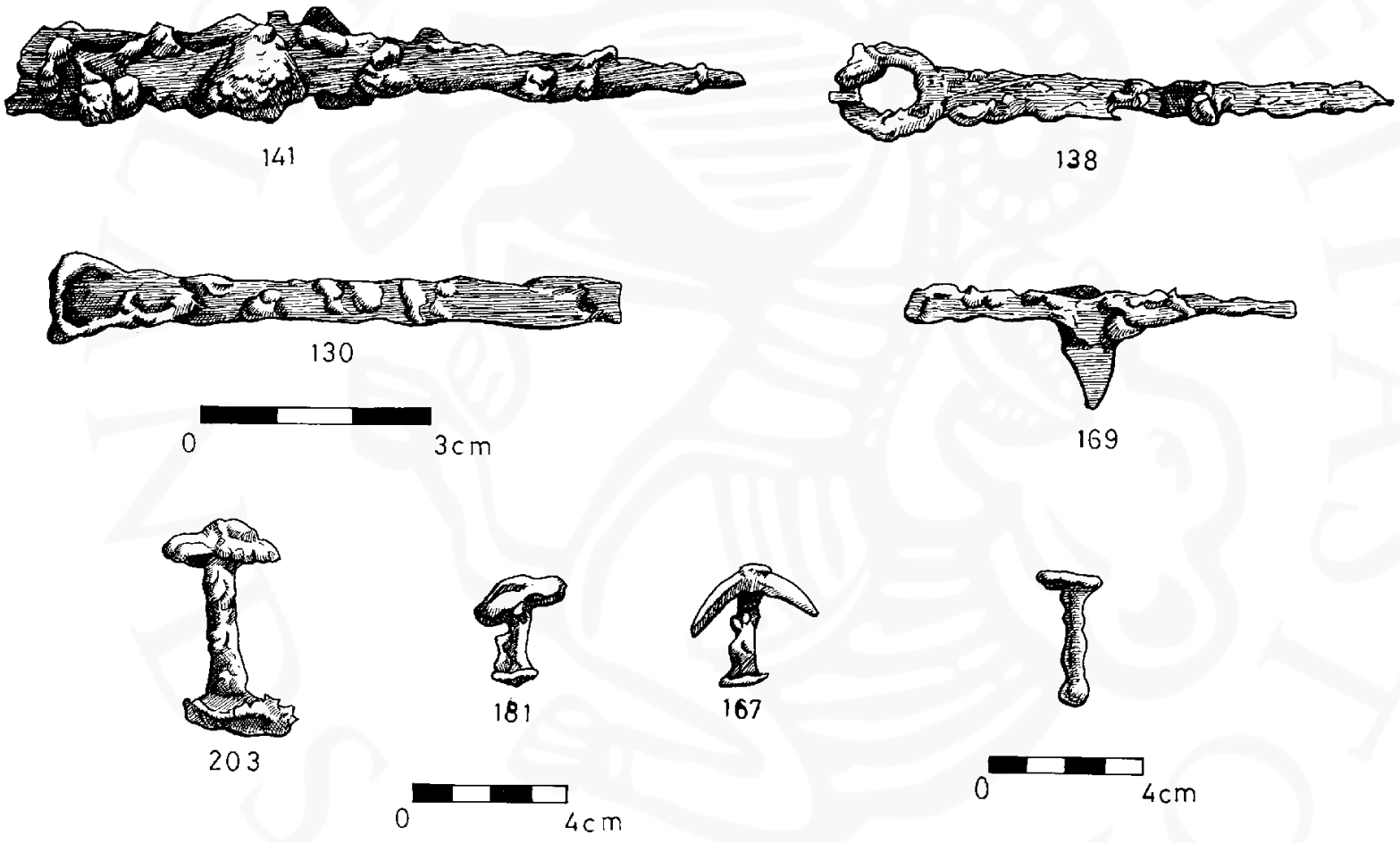
HST 98



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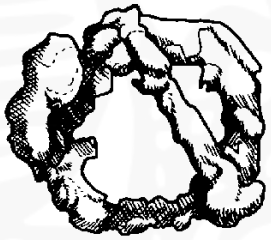
205.



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HST 98

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