



Kuml á Daðastaðaleiti í Reykjadal.

Fornleifarannsókn 2004-2005

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Reykjavík 2009
FS412-03265



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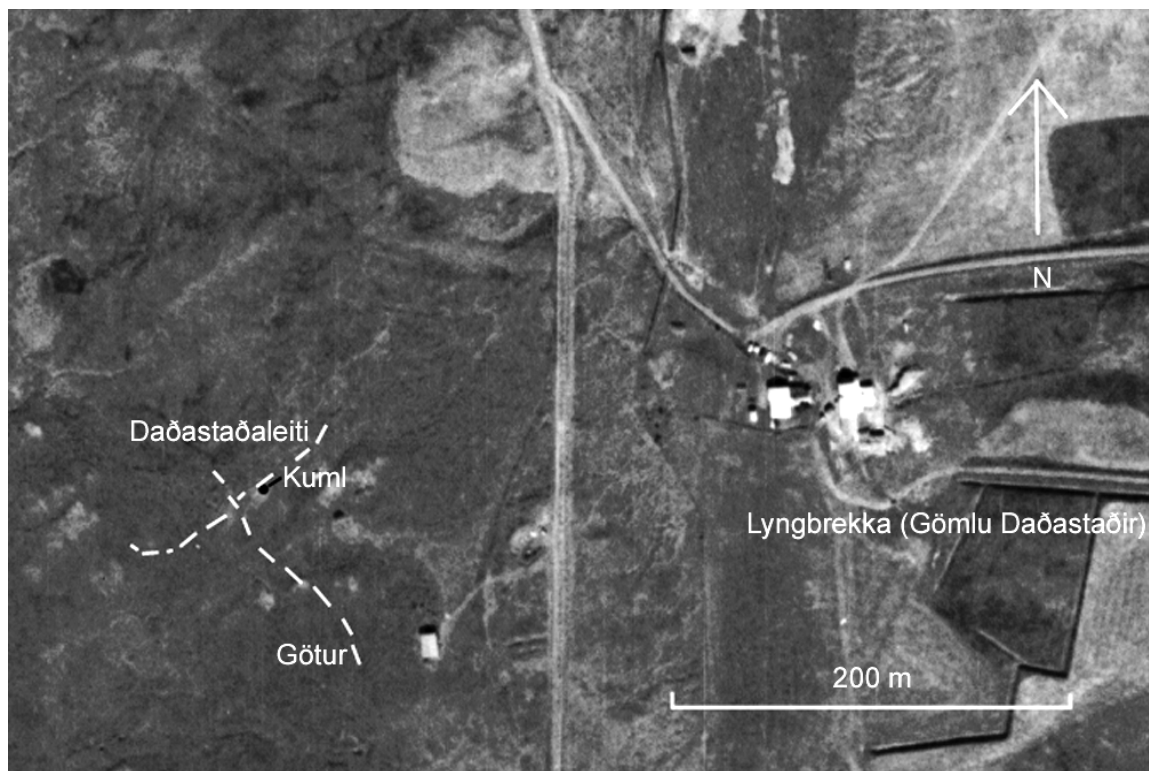
Forsíðumynd: Loftmynd af Daðastaðaleiti í Reykjadal, S-Þing.

Rauði hringurinn sýnir hvar kumlateigurinn fannst. Höf. loftm.:

Árni Einarsson.

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Mynd 1. Kumlateigurinn er til vinstri á myndinni. Strikalínur merkja gamlar götur (loftmynd: Landmælingar Ísl.).

Adolf Friðriksson: Lyngbrekka (Gömlu-Daðastaðir) í Reykjadal

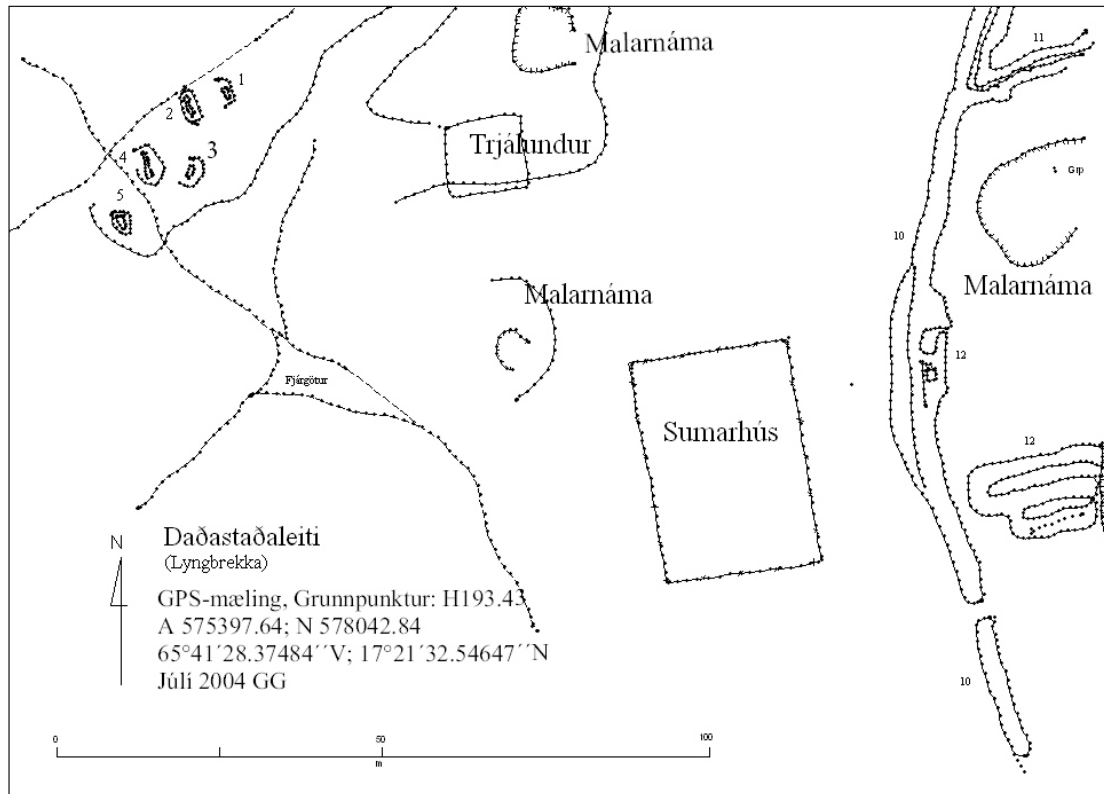
Inngangur

Árin 2003-2005 var gerð rannsókn í þremur stuttum lotum á meintum kumlum á leitinu ofan við nýbýlið Lyngbrekku í Reykjadal, Suður-Þingeyjarsýslu. Rannsókuð var gröf manns og hests, en líkur eru á að þar leynist fleiri grafir. Þessi skýrsla greinir frá árangri fyrstu athugana á Daðastaleiti.

Verkefnið var styrkt af Kristnihátíðarsjóði og Hinu Þingeyska fornleifafélagi. Rannsókninni stjórnaði Adolf Friðriksson, en aðrir þátttakendur í vettvangsathugunum voru Eiríkur Jónsson og Garðar Guðmundsson; Magnús Á. Sigurgeirsson rannsakaði gjóskulög. Colleen Batey, Guðrún Alda Gísladóttir og Aaron Kendall rannsökuðu gripi, Hildur Gestsdóttir mannabein, og Tom McGovern og Rúnar Leifsson dýrabein. Þjóðminjasafn Íslands sá um forvörslu gripa.

Minjar og munnmæli

Tilgangur rannsóknarinnar var ekki einungis að rannsaka heiðinn greftrunarsið, heldur einnig að láta reyna á hvort munnmæli, örnefni og sagnir gætu nýst sem vísbendingar við leit að fornum gröfum. Eins og kunnugt er þá finnast kuml sjaldnast við rannsókn eða kumlaleit (<10%), heldur vegna uppblásturs, framkvæmda eða annars sem hefur rask í för með sér. Kumlaleit er vonlítil, nema hægt sé að takmarka leitina við líkleg svæði. Rannsóknin á Lyngbrekku var tilraun til að nota þá þekkingu sem nú liggur fyrir um staðfræði kumla til að leita að áður óþekktum kumlum. Lyngbrekka var valin vegna þess að þar gafst jafnframt tækifæri til að nota þjóðsögu sem “heimild” um kuml. Í íslenskri fornleifafræði hefur verið sterk tilhneiging til að nota ekki ritaðar heimildir, og hefur þjóðsögum og munnmælum einnig verið úthýst sem leifum af rómantískri fornfræði 19. aldar. Gagnrýnin afstaða í þessa veru er vissulega réttmæt, en þó er rétt eins mikilvægt að halda áfram að gera tilraunir með hverskyns heimildir í því skyni að varpa ljósi á fortíðina. Sá sem þetta ritar kýs að líta svo á að þjóðsögur, munnmæli og örnefni megi nota sem mikilvægar vísbendingar um hvar kuml sé að finna. Hér er ekki átt við að munnmæli og sagnir sem þessar séu sannar, og að leit eftir kumlum samkvæmt sögnunum sé gerð í þeim tilgangi að sanna eða hrekja sagnirnar. Sannfræði þessara sagna skiptir í raun engu. Það sem máli skiptir er að þær veita rannsakandanum aðgang að reynslu og skynjun ábúenda á landi sínu. Sagnir verða oft til í kringum óvenjulega staði sem ábúendur, á ýmsum tímum, taka eftir. Einn sagnaflokkanna snýst um meinta greftrunarstaði úr heiðni og þannig verða til mörg örnefni, s.s. Haugavað, Fornmannshóll, Dys, Steinkudys, Smaladys o.s.v.fr. Athyglisvert er að sumir þessara hóla og þjóðsögulegu dysja eru þar sem algengt er að kuml hafa fundist, s.s. við gamlar leiðir eða á landamerkjum. Daðastaðaleiti, sem er í hlíðinni ofan við nýbýlið Lyngbrekku er dæmi um slíkan stað.



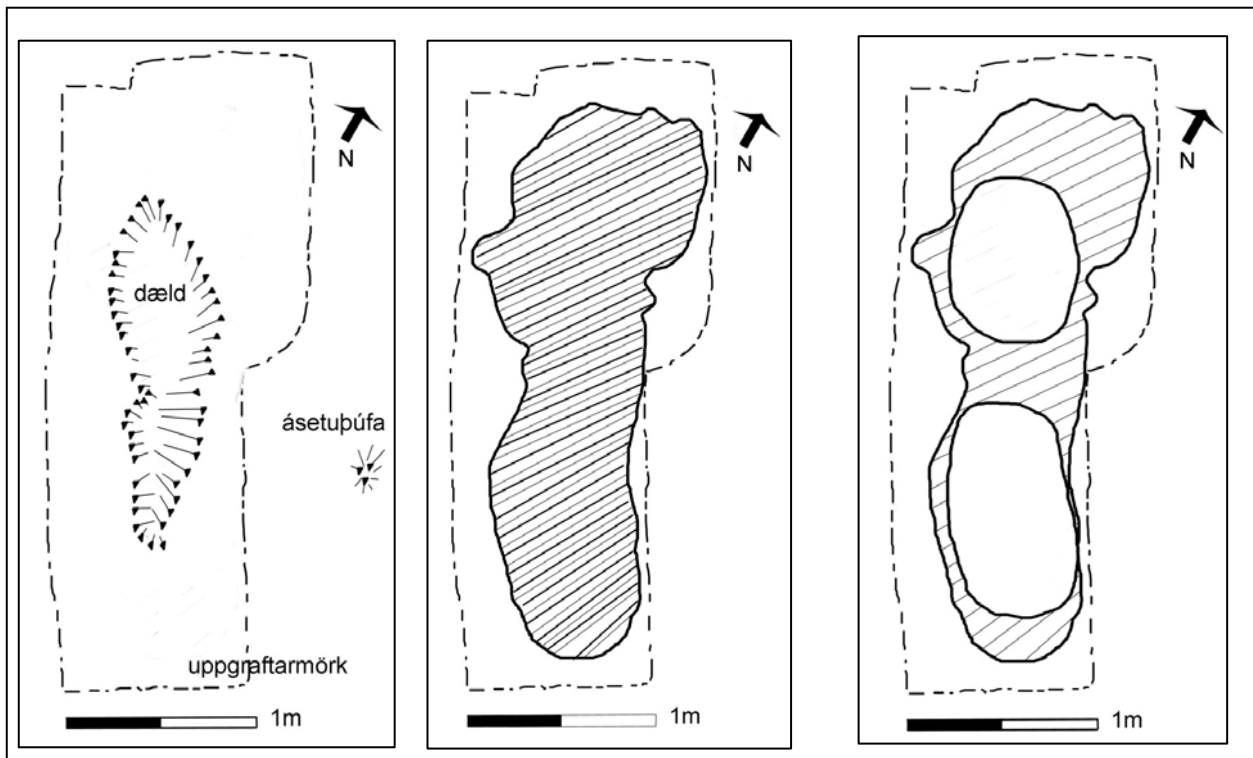
Mynd 2. Afstöðumynd af kumlateig og næsta nágrenni (Garðar Guðmundsson 2004).

Í Reykjadal gengur sú sögn að bardagi hafi átt sér stað í fornöld á leitinu fyrir ofan Lyngbrekku, en ekkert nánar er um hann vitað. Maður frá næsta bæ, Narfastöðum, mun hafa leitað þar að fornum gröfum um árið 1900, en ekkert fundið. Ekki var vitað um nein grafarummerki á leitinu þegar við gerðum þar lítilsháttar vettvangsathugun sumarið 2003. Í ljós kom að þar á leitinu eru nokkrar dokkir, sem óneitanlega svipar til grafa sem raskað hefur verið og við höfum skoðað á öðrum kumlstöðum, s.s. í Berufirði á Barðaströnd. Gamla þjóðleiðin fram Reykjadal lá fyrir ofan bæjarröðina vestanmegin í dalnum, og hefur heimreiðin að Gömlu-Daðastöðum, þar sem Lyngbrekka stendur nú, legið hjá Daðastaðaleiti. Þar á leitinu, á flötum hólkoli, eru sjáanlegar 4 dokkir, sem allar eru aflangar 1-2 m langar, um 50 sm breiðar, og snúa allar eins, þ.e. N-S. Eftir vettvangsskoðun 2003 ákváðum við að gera þar prufugróft 2004 til staðfestingar, og gerðum síðan rannsókn með uppgrefti 2005.

Uppgröfturinn

Uppgröftur hófst 27. júlí 2004, og var haldið áfram með hléum til 13. ágúst s.ár og 27.- 28. ágúst 2005. Við grófum í næstaustustu dokkina. Hún er á hæsta punkti leitisins, og rétt austan hennar er áberandi ásetupúfa. Sjálf dokkin sneri NV-SA, og var um 1,5 m löng og allt að 50 sm breið. Þegar yfirborðið var fjarlægt kom strax í ljós að þar var e.k. niðurgroftur. Uppgraftarsvæðið varð alls 1,35 m breitt (A-V) og 3,35 m langt (N-S).

Þegar stungið var um 25 sm niður kom í ljós grátt gjóskulag (V-1477), það var allt að 2 sm þykkt og þakti allan uppgrafarreitinn. Staðurinn er lyngi vaxinn og ofan við þessa gjósku er lítill jarðvegur og laus í sér, enda aðallega rótarkerfi gróðursins. Undir 1477 er um 3-4 þykkt moldarlag, og þar undir H-1300 lagið. Undir eldra gjóskulaginu var 2-5 sm þykkt moldarlag.



Mynd 3. til v.: fyrir uppgröft; í miðju: grafarbrún og fylling; til h.: kuml eftir uppgröft.

Þegar þessi lög voru fjarlægð, kom í ljós aflöng gryfja, sem lá NV-SA, með skörðóttum brúnum og mjög blandaðri fyllingu. Í fyllingunni var ljósbrún mold með rauðleitri slikju, torfusneplar, og gráir, svartir, grágrænir, og mjög ljósir gjóskublettir, þ.e.a.s. úr landnámssyrpunni sem og forsögulegri gjósku, þ.e. úr Heklu-4 og H-5. Niðurgrofturinn var fremur óreglulega aflangur, mesta lengd 2,95 m frá NV til SA, og mesta breidd um 1,05 m. Þessi fylling náði út að grafarbrúnum allan hringinn, en gryfjan hafði ljóslega ekki verið sléttfull, því fyllingin lá um 10 sm lægra við miðju en út við brúnirnar. Við uppgröft á

fillingunni komu smátt og smátt í ljós brúnir á tveimur þrengri gröfum, með mjög bjúgum hornum. Var fyllingin laus í sér efst en þéttari eftir því sem neðar dró, og í henni bein og gripir á tvístringi. Fáeinir steinar voru í henni, en að sögn Hermanns Aðalsteinssonar bónda á Lyngbrekku er landið grjóttlaust. Ljóst er að hróflað hafði verið við gröfunum eftir greftrun, en áður en gjóskulagið úr Heklu féll um 1300. Við raskið hefur útlit grafanna spillst og jafnvel einhver hluti haugfjár og beina verið tekinn. Svo virðist sem grafarræninginn hafi grafið sig niður á norðausturhorn kumlsins, og þar niður og til suðurs, eftir miðri gröf. Talsvert torfefni með LNS í torfinu var í fyllingunni, og má vera að torf hafi verið lagt yfir kumlið á sínum tíma. Að öðru leyti verður fátt sagt um mögulega hauggerð.

Grafirnar reyndust vera jafndjúpar, um 90 sm frá yfirborði, en hafa líklega verið um 50 djúpar frá upprunalegu yfirborði. Þrátt fyrir að efri brún þeirra hafi verið skert við raskið á sínum tíma, má sjá að þær hafa verið teknar í gegnum LNS, og ofan á þeirri gjósku, við brúnir grafanna, mátti sjá upprunalegt uppkast úr gröfinni, um 10 sm þykkt, sem var óhreyft af seinni tíma raski. Grafirnar náður niður í óhreyfða mold undir LNS, í gegnum H-4 og H-5 og botn þeirra lá í ljósbrúnni moldinni undir H-5.

Syðri gröfin var stærri og sneri NV-SA. Ekki er lengur hægt að segja til um upphaflega lengd og breidd við efri brún, þar eð þær hafa verið skertar, en botn grafarinnar var skýr, um 115 sm l., og 65 sm br. Botni nyrðri grafarinnar hallaði heldur meir til NNV-SSA, og var nær sporbaugóttur, 85 sm l. Og 68 sm br. Á milli grafanna var um 30 sm br haft.

Í fyllingunni fundust bein úr *manni*, *hundi* og *hesti*. Mannsbeinin fundust flest í syðri gröfinni, hundsbeinin ofan á haftinu og í grafarendum beggja vegna við það, en nær öll hrossbeinin í einum hrærigraut í þeirri nyrðri. Botn syðri grafarinnar var sem áður sagði aðeins um 115 sm langur, og gröfin gæti ekki hafa verið lengri en um 150 sm. Er það heldur stutt mannsgröf, en eðlileg stærð ef líkið hefur verið lagt á hlið og lítilliga kreppt. Líklegt er því að maðurinn hafi legið í syðri gröfinni, en óvíst er um í hvorum enda höfuðið hefur verið lagt upphaflega. Höfuðkúpan fannst syðst, en hún lá með andlitið í suður og því ekki í upprunalegri legu. Ofan á höfðinu lá upphandleggsbein, kjálkinn var við norðurgafli grafar og þar hjá tvö sköflungsbein, annað ofan í gröfinni, en hitt upp á brún haftsins milli grafa. Þessi bein eru sennilega öll úr einum einstaklingi, líklega konu, 35-45 ára, sem hefur verið um 1.60 á hæð (sjá skýrslu Hildar Gestsdóttur).

Einungis um fjórðungur mannsbeinagrindarinnar var eftir í og við gröfina, og hafa allmörg bein því verið fjarlægð þegar kumlið var rofið, nema haugbrjóturinn hafi skilið gröfina eftir opna, og beinin smám saman týnt tölunni. Talsvert meira var eftir af hestinum og hundinum (sjá skýrslur T. McGovern og Rúnars Leifssonar). Af beinum hundsins má sjá að hann var

gamall og kominn með gigt þegar hann var heygður. Hrossið er karlkyns og var um 6 vetra. Báðum dýrunum hefur verið lógað með þungu höggi á höfuðskelina.

Innan um beinin í báðum gröfum fundust 12 brot úr járni og einn hrafntinumoli. Á kjálkabeini mannsins sást smit af spanskgrænu og má ætla að þar hafi legið gripur úr bronsi sem nú er horfinn. Meðal járnbrota voru leifar af *hnífi* með brotinn tanga og nokkur blaðbrot, fleygur úr járni, *naglar* og *rær* (sbr. fundaskýrslu C. Batey og Guðrúnar A. Gísladóttur).



Mynd 4. Kuml eftir uppgröft. NV-endinn er til vinstri.

Þessi kumlfundur hefur ekki mikið gildi hvað greftrunarsíð á víkingaöld varðar, enda kumlið stórskemmt af raski og óvíst hver upphaflegur umbúnaður eða haugfé var. Hisnvegjar staðfestir þessi fundur gagnsemi þess að gera kerfisbundna leit að kumlum með örnefni og sagnir sem vísbendingar. Á Daðastaðaleiti var aðeins grafið á einum stað, en þarna á leitinu eru fleiri dokkir og sú sem grafið var í, og eflaust fleiri kuml.

Collen E. Batey & Guðrún Alda Gísladóttir: The Finds from Daðastaðaleiti

Thirteen finds under eleven finds numbers were retrieved from pagan burial at Daðastaðir in Reykjadalur S-Pingeyjarsýslu in 2004-2005. The finds numbers are from 04-1 to 5 and 05-06 to 11. All finds were cleaned, dried, repacked and registered in the excavation database. Conservation work is concluded by the National Museum. All the finds were found in "Robbers backfill" either in the south or the north end of the grave. All the finds but one are all of iron - or composite of iron and wood. The preservation of the artefacts is fair for Icelandic conditions.

This small group of finds were all recovered from the backfill of a grave (Kuml 1) which had been robbed in antiquity. Although two of the finds are of indeterminate iron (Finds 2004-01 and 05), the other two iron finds can be identified as a knife (04-02) and a probable chisel (04-03), the latter actually has clear impressions of textiles in the corrosion products. The knife is fragmentary, having been broken across its blade but with clear traces of hafting and possibly scabbard. The type can be seen in the large York assemblage published by Ottaway (1992, 595 no 2927, of type C3, 570). The identification of Find 03 as a chisel is not completely certain prior examination in conservation. This type of find is not very common, Ottaway described a single example from a later Viking context (Ottaway 1992, 521) citing a small number of parallels from contemporary English sites and one from a Birka grave. An additional find, (04-04), is a faceted piece of obsidian. It is possible that this might have been used as a strike-a-light, although all other parallels in Iceland are of flint and jasper (cf Eldjarn and Friðriksson 2000, 62-3, 11476 fig 13). Consideration of the suitability of obsidian for such an activity is needed because if indeed it was ideally suitable it is surprising that it is not a more common find.

Five finds of the assemblage (05-7, -8, -11) are nails with wood remains attached to it. They do indicate a wood structure in the grave, possibly a coffin or a wooden chest. One find (05-10) resembles the “chisel” (04-03). It is broken at one end, with rectangular section and softly tapering towards the other. It awaits conservation and x-ray. Other finds is a sub rectangular object (05-06), function undetermined, and a square rove (05-09).

Three of the finds come from the south side of the grave: Nail (05-07), the chisel? (05-10) and the rove (05-09). Five finds are from the north side of the grave: Three nails nos. (05-11), one nail (05-11) and then the object (05-06).

Chisel has been found in one pagan burial in Iceland before, in Berufjörður (cf. Eldjárn and Friðriksson, 111), which was excavated in the year 1898. Coffins are rare in Icelandic pagan burials, four examples are known (op. cit., 274) but indications of wooden chests are more common with seven examples from six graves (op. cit. 401).

As stated above, all of the artefacts were found in the robber’s backfill and therefore none of the artefacts were *in situ*. That means that original total number, function and placement of the surviving artefacts is difficult to determine.

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Appendix: Finds List.

| Finds no | Context | Type | Material | Weight (g) | Count | Notes |
|----------|--------------------------|---------------|-----------|------------|-------|---|
| 04-01 | Robber's trench backfill | Indeterminate | Iron | | | Pieces of metal including 2 pieces of ?blade |
| 04-02 | Robber's trench backfill | Knife | Iron | | | Knife blade incomplete with possible handle |
| 04-03 | Robber's trench backfill | Chisel? | Iron | | | Probable metal spike with traces of clear textile |
| 04-04 | Robber's trench backfill | Obsidian | Stone | | | 1 piece, possible strike a light |
| 04-05 | Robber's trench backfill | Indeterminate | Iron | | | Flat piece with traces of ?textile impression |
| 05-06 | Robber's trench backfill | Object | Iron | 1,9 | 1 | Subrectangular iron artefact with rectangular section. Concretaional surface at one side. L:28,5 mm. B:10 mm. T:5 mm. |
| 05-07 | Robber's trench backfill | Nail | Composite | 3,3 | 1 | Nail shank broken at both ends. Wood fragments attached |
| 05-08 | Robber's trench backfill | Nail | Composite | 6 | 1 | A nail shank tapering towards the end. Wood fragments attached. |
| 05-09 | Robber's trench backfill | Rove | Iron | 3 | 1 | Square rove with nail remains in the middle hole and wood fragments attached. Found with find no. 7. |
| 05-10 | Robber's trench backfill | Chisel? | Iron | 16 | 1 | A iron rod broken and one end with rectangular section and softly tapering towards the other. Heavily corroded and has concretaional surface. A chisel? |
| 05-11 | Robber's trench backfill | Nail | Composite | 9 | 3 | Nails shanks with wood fragments attached. One with point. |

Hildur Gestsdóttir: Human skeletal remains

The human skeletal collection from the 2004-5 excavations in Daðastaðir includes 36 bones or bone fragments and 21 teeth from one burial which had been disturbed prior to excavation.

Methods

The main emphasis of the osteological analysis was to ascertain the minimum number of individuals (MNI) in the burial. To achieve this, the bones are sorted by element, and where applicable right and left side. Where possible bones from the same individual are identified, either by matching up articular surfaces, or the right and left side bones. Similarly bones that obviously belonged to different individuals, for example difference in size or robusticity are separated. Where possible, the age and sex of bones is recorded. The MNI is achieved by counting the most frequently occurring bone, and comparisons of size, age and sex.

Sexually diagnostic characteristics of the skull and the os coxa could be recorded (see for example Walrath *et al*, 2004, Schwartz, 1995 and Buikstra & Ubelaker, 1994) and measurements taken from several articular surfaces and compared to standards based on Bass (1995) and Brothwell (1981). Age at death could be estimated from dental wear (Brothwell, 1981) and from suture closure (Meindl & Lovejoy, 1985). Upper and lower long limb bones were preserved well enough to estimate living stature based both on standards from Steele & McKern (1969) in the case of incomplete bones and Trotter (1970) in the case of complete long bones.

Results

For detail about the bones and teeth present see appendix 1. The preservation of the bones present is average; there is little fragmentation but some flaking of cortical bone. The MNI for Gömlu-Daðastaðir (Lyngbrekka) is one. In some instances where joint surfaces were preserved it was possible to articulate bones: the cranium and mandible, the T12 & L1, the left clavicle and humerus, the right ulna and radius and the left talus and calcaneus. In addition several of the right and left side bones are consistent with belonging to the same individual: the clavicles, humeri, radii, tibiae, tali and metatarsals. All these factors indicate that only one individual was buried in the grave at Gömlu-Daðastaðir.

The skull had both masculine and feminine characteristics and the analysis of that was inconclusive. However, the fragment of os coxa and measurements of the left glenoid fossa and left humeral head all indicate that this is a female.

Suture closed indicates an age at death of 42 ± 11 years. Dental attrition indicates a slightly younger age, 26-30 years. However, previous studies of human remains in Iceland have indicated that dental wear in archaeological skeletons in Iceland is not consistent with that in the rest of Europe (Hildur Gestsdóttir, 2004) and so established ageing methods tend to underage Icelandic skeletons. Age at death was therefore 35-45 years.

Measurements could be taken of the left humerus, right femur and right tibia to estimate stature, which was calculated at 160 ± 5 cm.

Pathological anomalies recorded include grade 1 porosity on the inferior body of the L1, age related degenerative changes and a small (0.18mm in diameter) on the posterior medial quadrant of the posterior calcaneal articular surface of the left talus, probably osteochondritis dissecans, which is caused by the death of bone tissue within a joint due to a significant obliteration of the blood supply to the bone because of some traumatic event. The necrotic fragment is then loose within the joint, resorbed or can heal back (Roberts and Manchester, 1995). In this case the fragment has not healed back. Dental changes noted are calculus formation, slight to severe on all the teeth present and antemortem tooth loss of the mandibular right I1. In addition there are slight mandibular tori, which are a non-metric trait quite commonly seen in Icelandic skeletons.

Discussion.

The human skeletal collection from Daðastaðir represents the remains of one individual, probably female, 35-45 years at the time of death, with a living stature of 160 ± 5 cm. Pathological changes include dental calculus, antemortem tooth loss, degenerative spinal joint changes and osteochondritis dissecans of the left talus.

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Appendix 1

Bones

| Bone | Side | Segment | Condition | MNI | Count | Age | Sex | Stature | Unit | Year |
|-------------------|-------|--------------------|---|-----|-------|-----------|-----|---------|-----------|------|
| Cranium | n/a | Complete | Complete skull | 1 | 1 | 42± 11 | M? | n/a | K1 | 2005 |
| Mandible | n/a | Complete | Slightly flaked, green colour inside left alveolar bone & slightly inside right alveolar bone. | 1 | 1 | 26- 30 | F | n/a | K1 | 2004 |
| Cervical vertebra | n/a | Body | Fragment of a lower C vertebral body. | 1 | 1 | Ad | n/a | n/a | K1(S) | 2005 |
| Thoracic vertebra | n/a | T12 | Body: all the cortical bone is missing, the arch is present, only the inferior ½ of the superior articular process. | 1 | 1 | Ad | n/a | n/a | K1 | 2004 |
| Lumbar vertebra | n/a | L1 | Posterior quadrants of the superior and inferior body are present, only inferior ½ of right inferior articular process. | 1 | 1 | Ad | n/a | n/a | K1 | 2004 |
| Clavicle | Right | Complete | Slight damage to both ends. | | | | | | K1 | 2004 |
| | Left | Complete | Slight damage to both ends. | 1 | 2 | Ad | n/a | n/a | K1 | 2004 |
| Scapula | Left | Glenoid & acromion | The blade is damaged and mostly missing post-mortem. | 1 | 1 | Ad | F | n/a | K1 | 2004 |
| Humerus | Right | Complete | Some damage to both epiphyses, very gracile | | | Ad | n/a | n/a | K1 (S) | 2005 |
| | Left | Complete | Some damage to both articular ends | 1 | 2 | Ad | F | 168±4 | K1 | 2004 |
| Radius | Right | Shaft | Proximal epiphysis missing post-mortem. Damage to anterior ½ of the distal epiphysis. There is some flaking of the cortical bone. | | | | | | K1 | 2004 |
| | Left | Shaft | Both epiphyses are missing post-mortem. There is some flaking of the cortical bone. | 1 | 2 | Ad | n/a | n/a | K1 | 2004 |
| Ulna | Right | Proximal ½ | The shaft is broken midline. The proximal epiphysis is damaged and the cortical bone flaked. | 1 | 1 | Ad | n/a | n/a | K1 | 2004 |
| Meta-carpal | ? | Shaft | One metacarpal, both epiphyses damaged, not able to identify which one. | 1 | 1 | Ad | n/a | n/a | K1 | 2004 |

| Bone | Side | Segment | Condition | MNI | Count | Age | Sex | Stature | Unit | Year |
|-------------------------|-------|-----------------|--|----------|-----------|-----|-----|---------|--------|-----------|
| Proximal upper phalange | ? | Complete | Three complete phalanges | 1 | 3 | Ad | n/a | n/a | K1 (S) | 2005 |
| Middle upper phalange | ? | Complete | Three complete phalanges. | 1 | 3 | | | | | |
| Os coxa | Left | Ilium & ischium | The iliac blade is mostly missing post-mortem, all the cortical bone is flaked. | 1 | 1 | Ad | F | n/a | K1 | 2004 |
| Femur | Right | Complete | Both the articular surfaces are damaged post-mortem. Some flaking of cortical bone. | 1 | 1 | Ad | n/a | 152±4 | K1 | 2004 |
| Tibia | Right | Complete | Damage to both epiphyses. | | | | | | K1 (N) | 2005 |
| | Left | Complete | Damage to both epiphyses. | 1 | 2 | Ad | n/a | 161 | K1 (N) | 2005 |
| Fibula | Right | Shaft | The distal epiphysis is broken off post-mortem, but present. Both articular ends damaged. All cortical bone flaked. | 1 | 2 | Ad | n/a | n/a | K1 | 2004 |
| Talus | Right | Complete | Some damage to all articular surfaces and flaking of cortical bone. | | 1 | Ad | n/a | n/a | K1 | 2004 |
| | Left | Complete | Some damage to all articular surfaces and flaking of cortical bone. | 1 | 1 | Ad | n/a | n/a | K1 | 2004 |
| Calcaneus | Left | Fragment | There is damage to the medial side and calcaneal tuberosity. Some damage to all articular surfaces. | 1 | 1 | Ad | n/a | n/a | K1 | 2004 |
| Navicular | Left | Fragment | Small fragment | 1 | 1 | Ad | n/a | n/a | K1 (S) | 2005 |
| Cuboid | Right | Fragment | A fragment of probably the right cuboid, includes part of the articular surface for the IV metatarsal. | 1 | 1 | Ad | n/a | n/a | K1 | 2004 |
| Metatarsal | Right | Shaft | 1st: damage to medial side & both articular surfaces. 2nd: Distal epiphysis missing post-mortem. Damage to proximal epiphysis. X1 unidentifiable shaft | | | | | | K1 | 2004/2005 |
| | Left | Shaft | 5th: both epiphyses damaged. | 1 | 4 | Ad | n/a | n/a | K1 | 2005 |
| Unknown | ? | n/a | Bone with all cortical bone missing. Possibly a medial cuneiform or patella | 1 | 1 | n/a | n/a | n/a | K1 | 2004 |
| TOTAL | | | | 1 | 36 | | | | | |

Appendix II: Teeth

| Area | Tooth | Presence | Develop- ment | Enamel hypoplasia | Caries | Calculus | Abscess |
|------------------|-------|----------------------|------------------|----------------------|--------|----------|---------|
| Maxilliary right | M3 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary right | M2 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary right | M1 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary right | P2 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary right | P1 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary right | C | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Maxilliary right | I2 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Maxilliary right | I1 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Maxilliary left | I1 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Maxilliary left | I2 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Maxilliary left | C | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Maxilliary left | P1 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary left | P2 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Maxilliary left | M1 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary left | M2 | Present | n/a | n/a | n/a | 1 | n/a |
| Maxilliary left | M3 | Present | n/a | n/a | n/a | 1 | n/a |
| Mandibular right | M3 | Present | n/a | n/a | n/a | 1 | n/a |
| Mandibular right | M2 | Present | n/a | n/a | n/a | 1 | n/a |
| Mandibular right | M1 | Present | n/a | n/a | n/a | 2 | n/a |
| Mandibular right | P2 | Present | n/a | n/a | n/a | 2 | n/a |
| Mandibular right | P1 | Present | n/a | n/a | n/a | 3 | n/a |
| Mandibular right | C | Present | n/a | n/a | n/a | 3 | n/a |
| Mandibular right | I2 | Present | n/a | n/a | n/a | 3 | n/a |
| Mandibular right | I1 | Absent antemortem | n/a | n/a | n/a | n/a | n/a |
| Mandibular left | I1 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Mandibular left | I2 | Present | n/a | n/a | n/a | 3 | n/a |
| Mandibular left | C | Present | n/a | n/a | n/a | 2 | n/a |
| Mandibular left | P1 | Present | n/a | n/a | n/a | 2 | n/a |
| Mandibular left | P2 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Mandibular left | M1 | Present | n/a | n/a | n/a | 1 | n/a |
| Mandibular left | M2 | Absent postmortem | n/a | n/a | n/a | n/a | n/a |
| Mandibular left | M3 | Present | n/a | n/a | n/a | 1 | n/a |

Thomas H. McGovern: Report of Bones from Daðastaðaleiti, N-Iceland (2004).

Background

On July 27th-28th & August 10th 2004 Adolf Friðriksson of the Archaeological Institute Iceland investigated a probable pagan burial near the farm of Dadastaðir. The grave had been plundered in antiquity (prior to the 1477 tephra fall). However, bone fragments identifiable as human, dog, and horse were recovered from the grave fill and the robbers' spoil heap. This report documents the zooarchaeological portion of this grave find.

Report

The bones included in this grave lot represent three species, human (*Homo sapiens L.*, see Gestsdóttir's report), domestic dog (*Canis familiaris L.*) and horse (*Equus caballus L.*). More bones were found in 2005 in the same burial and are treated separately in Rúnar Leifsson's report.

Horse bones

Horse fragments included were:

- 1 Axis vertebra, fused.
 - 2 Cervical (neck) Vertebrae, probably cervicals 3 and 5 (thus not in articulation). From fully adult (>4-5 yrs) animal with completely fused epiphyses.
 - 1 Thoracic vertebra, completely fused epiphyses.
 - 1 Rib, proximal end (possibly originally in articulation with Thoracic vertebra above).
 - 2 Sesamoids
 - 2 Carples
 - 2 Third phalanx (hoof) also from an adult animal of a smaller breed (such as Icelandic horse), showing some age-related pathology.
 - 1 Radius, proximal (small fragment)
 - 1 Fourth (accessory) metapodial complete
 - 1 Incisor, heavily worn, from mature-old adult
 - 1 Canine, heavily worn, also from a fully mature adult.
 - 1 Second phalanx, fully fused mature animal. Metrics (mm, Von den Dreisch 1976) Bd 40.05, GL 81.0, SD 30.49, Bp 51.5
- Total: 17 bones of horse.

Discussion: the partial horse skeleton is clearly disturbed, with fragments coming from many parts of the body. It would appear that a complete or nearly complete horse was interred, not just a head. The state of the teeth and fusion of the vertebrae indicate an animal that was probably a bit past its prime, though still apparently healthy adult. All the bones could have come from a single individual, and the consistent age indicators do argue in favor of a single animal, but this cannot be stated with certainty.

Dog Bones

Dog bones in the Dadastaðir KUML 1 deposit comprise the following elements

- 1 Femora, left, fully fused proximally & distally. Bd 31.6, GL 186.0, SD 13.4, Bp(1) 42.9, Bp(2) 17.3
- 1 Femora, right, fully fused proximally and distally. Bd 31.9, GL 187, SD 13.2, Bp(1) 42.4, Bp(2) 18.0
- 1 Humerus, right, fully fused proximally and distally, pathological lipping on both proximal and distal ends. Bd 33.3, GL 167.3, SD 10.3, Bp(1) 46.7, Bp (2) 30.0
- 1 Humerus, left, fully fused proximally and distally, also has pathological lipping on both articular ends. BD 34.8, GL 167.1, SD 10.34, Bp(1) 45.6, Bp(2) 30.3
- 1 Innominate, left, fully fused
- 1 Innominate, right, fully fused
- 1 astragalus
- 1 metatarsus, shaft
- 2 ribs, proximal
- 1 radius, whole, fused proximally SD 10.30, Bp 17.7
- 1 cervical vertebra, fully fused
- 7 thoracic vertebrae, fully fused
- 3 lumbar vertebrae, fully fused
- 1 upper M3 carnassial tooth, exceptionally worn, old adult.
- 11 small terrestrial dog sized rib fragments.

Total 23 definite dog bones, 11 additional probable dog bones.

Discussion: These elements very probably come from the same individual dog, as long bones and pelvis are paired halves, fusion states are uniform, and the measurements are very similar. This dog was evidently not only an adult but also a fairly aged animal. Tooth wear is extreme and the apparent osteoarthritis around the humerus (both joints) strongly suggest an animal at the end of a long life. The Dadastaðir dog is of medium size and build, not unlike the general range of modern traditional Icelandic breed. Humerus is very similar in size to the Hrísheimar dog find.

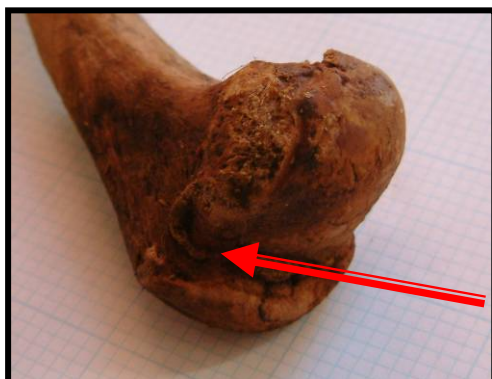


Figure 1) Probable arthritic lipping around the edge of the proximal articular facet of the dog humerus.

Rúnar Leifsson: A zooarchaeological report on the animal bones excavated at Daðastaðaleiti in 2005

Background

During a survey in 2003 a likely heathen burial site was found on the farm Lyngbrekka, formerly known as Daðastaðir, in Reykjadalur, Iceland. The excavation of the site begun in 2004 when bones from a human, a horse and a dog were found. Continuing in 2005, excavators uncovered two graves, which were adjacent to each other and are likely to represent a single funerary event. One of the graves contained a horse skeleton and the other a human and a dog. Both animal skeletons were well preserved, but the graves had been robbed in antiquity. It is certain that this took place prior to AD 1300 because two naturally deposited and undisturbed tephras were above the graves, one dating to AD 1477 and the other to AD 1300. This report documents the horse and dog remains found during the 2005 excavation.

Horse bones

The following horse specimens were found:

1 Cranium, from a fully adult male. All the maxillary teeth show moderate to heavy wear (Grant system ca g) and the sex can be determined by the presence of male canines. A serious injury is evident on the cranium. The braincase is severely broken distally and the fracture outline is dark in colour, the same as the surrounding bone. This indicates that the cranium was most likely broken in antiquity. Further, the break probably occurred whilst the cranium was still protected by soft tissue because no scratch marks surround the break. It is quite likely that the live animal was stricken in the head with a blunt instrument.

1 Complete mandible from a fully adult male. All the mandibular teeth show moderate to heavy wear (Grant system ca g).

1 Atlas, fully fused.

1 Axis, fully fused.

2 Cervical vertebrae, fully fused.

15 Fragments of thoracic vertebrae, (a few vertebrae are complete) fully fused.

3 Lumbar vertebrae, 4th-6th. The 5th and 6th vertebrae are fused together. The pathology is probably not age related because no osteoarthritis can be seen on the articulation surfaces and further, no extra bone growth or calcification seems to have taken place on either ventral or dorsal surfaces. The fusion is most likely due to ongoing stress on the lower back, e.g. from pulling heavy loads.

1 Sacrum.
 42 Rib fragments of varying sizes.
 2 Scapulae, left and right, fully adult.
 1 Humerus, left, fully fused. Biometrics (Von den Driesch 1976) GL 295.
 1 Radius + ulna, left, fused. Biometrics (Von den Driesch 1976) GL 335, SD 27.82, Bp 80.85, Bd 73.51.
 1 Radius + ulna, right, fused. Biometrics (Von den Driesch 1976) GL 334, SD 27.31, Bp 80.72, Bd not possible due to erosion.
 6 Carpals.
 3 Metacarpals (2nd, 3rd and 4th) left, fused together. Biometrics of m/c3 (Von den Driesch 1976) GL 224, Bp 49.4, Bd 48.2, SD 23.1.
 3 Metacarpals (2nd, 3rd and 4th) right, fused together. Biometrics of m/c3 (Von den Driesch 1976) GL 224, Bp 49.3, Bd 47.5, SD 22.9.
 2 innominate halves, fully adult.
 1 Femur, left, fully fused adult. Biometrics (Von den Driesch 1976) GL 400, SD 41.14, Bd 88.68, Bp [119].
 1 Femur, right, fully fused adult. Biometrics (Von den Driesch 1976) GL 398, SD 42.06, Bd [85], Bp not possible due to erosion.
 2 Patellae, left and right.
 1 Tibia, left, fully fused adult. Biometrics (Von den Driesch 1976) GL 356, Bd 73.7, SD 29.7.
 1 Tibia, right, fully fused adult. Biometrics (Von den Driesch 1976) GL 353, Bd 72.7, SD 28.4.
 2 Astragali, left and right.
 2 Calcanea, left and right.
 4 Tarsals.
 1 Third metatarsal, left, fully fused adult. Biometrics (Von den Driesch 1976) GL 271, Bp 48.3, Bd 48.5, SD 25.7.
 1 Third metatarsal, right, fully fused adult. Biometrics (Von den Driesch 1976) GL [267] Bp 44.2, SD 25.1, Bd not possible due to erosion.
 1 Fourth metapodial.
 1 Second metapodial.
 1 Third phalanx.
 1 Second phalanx, fully fused. Biometrics (Von den Driesch 1976) GL 44.9, Bp 49.32, Bd [42.24].
 1 Second phalanx, fully fused. Biometrics (Von den Driesch 1976) GL 44.01, Bp 50.65, Bd 47.19.
 1 Second phalanx, fully fused. Biometrics (Von den Driesch 1976) GL 45.66, Bp 51.78, Bd 48,34.
 1 Second phalanx, fully fused. Biometrics (Von den Driesch 1976) GL 46.73, Bp 48.29, Bd 44,56.
 1 First phalanx, fully fused. Biometrics (Von den Driesch 1976) GL 78.6, Bp 51.8, Bd 40.6, SD 19.4.
 1 First phalanx, fully fused. Biometrics (Von den Driesch 1976) GL 83.5, Bp 51.2, Bd 43.3, SD 19.7.

Discussion:

The equine bones found in 2005 at Daðastaðir probably represent a single individual. A majority of the skeleton is present, which is surprising because the grave was disturbed in antiquity. Most of the bones are quite well preserved and almost all show sign of root etching. It is evident from the canines in the maxillae and in the mandible that the horse was male. The individual was at least ca 6 years of age when it died. The minimal age limit is deduced from epiphysial fusion, all the characteristic bones, including the vertebrae, are fully fused. But judging by dental wear the individual may have been a few years older. Thus, the animal



Figure 1 The horse cranium

was in its prime; adult but not aged. The shoulder height of the horse was ca 1.40 m,¹ which is average for the modern Icelandic breed.

Judging by the completeness of the skeleton and the total lack of cut and/or chop marks, a whole carcass was laid to rest in the grave. Further, this indicates that the horse was slaughtered by the grave but not transported after death, simply because it would have proven very difficult to transport a horse carcass without dismembering it first. A serious injury is evident on the cranium. The horse was probably led to the grave where it was bashed in the forehead with a blunt instrument. The blow broke the distal part of the brain cavity and most likely stunned the animal. The injury would eventually have killed the horse and no other slaughter mark can be seen on the skeleton. Nevertheless, it is not unlikely that whilst the

¹ Based on regression equations from May (1985). Humerus: $295 * 4.634 = 1367.03$, r and l metacarpal: $224 * 6.102 = 1366.848$, r Femur: $401 * 3.501 = 1403.901$, l femur: $402 * 3.501 = 1407.492$, r tibia: $354 * 3.947 = 1397.238$, l tibia: $357 * 3.947 = 1409.079$, r metatarsal: $270 * 5.239 = 1414.53$, l metatarsal: $267 * 5.239 = 1398.813$

animal laid unconscious in the grave a cervical artery might have been pierced. This method of slaughter, first to stun and then to bleed the animal, is well known from many societies around the world.

An interesting ailment affected the horse's lower back. The 5th and 6th lumbar vertebrae are completely fused together. The condition is probably not age related because no evidence of osteophytosis nor exostoses (indicating osteoarthritis) is seen on the articulation surfaces. I.e. the fusion looks 'clean', with no extra bone growth on either the ventral or dorsal surfaces. The fusion more likely occurred due to ongoing stress to the animal's lower back. This condition in modern horses is usually associated with working animals pulling wagons and carriages (Terry O'Connor Pers. comm.).



Figure 2 The fused 5th and 6th lumbar vertebrae

It cannot be ruled out that the pathology arose through riding, perhaps as the rider's weight gradually caused soft-tissue damage along the vertebral column. However, it would be expected that riding related stress would occur more anteriorly, towards the middle of the column. Whereas the extra stress applied to the posterior part of the vertebral column, when a horse pulls a heavy load, can cause abnormal flexure which over a period of time would most likely result in some ossification of ligaments. It is an accepted fact that carriages did not exist in Viking age Iceland, mainly due to the lack of roads. Hence, if the pathology stems from pulling heavy loads, as the author finds most likely, then the horse might have been used to pull drift wood from the shore and further in land or used to pull sleds in the winter. There is even the remote chance that the horse was used to pull an ard or plough. In any case the condition would have developed gradually and would probably have caused some symptoms in the animal.

Dog bones

The following dog specimens were found:

1 Cranium. Based on tooth wear, especially heavy wear on the carnassials and the incisors, the dog is adult and quite aged. The cranium is broken, a large fracture is on the distal brain cavity. The fracture line is mostly dark which points to breakage in antiquity. The fracture could have happened when the burial was robbed, but it seems unlikely because the

zygomatic arch and the nasal cavity (both of which are more fragile parts of the cranium) are unbroken. Given the similar injury on the horse cranium, it is likely that the dog was slaughtered by being stricken on the head with a blunt instrument.

8 Small cranial fragments.

2 Mandible halves, left and right. Dental eruption and wear indicative of an adult.

1 Atlas, fully fused.

1 Axis, fully fused.

5 Cervical vertebrae, fully fused.

11 Thoracic vertebrae, fully fused.

4 Lumbar vertebrae, fully fused.

36 Rib fragments

1 Scapula, left, fully fused.

1 Humerus left, fully fused. Biometrics (Von den Driesch 1976) GL 168, SD 11.94 Bp 44.05, Bd 32.2. Some lipping on the proximal articulation surface, might be the first stages of age related osteoarthritis.

1 Humerus, right, fully fused. Biometrics (Von den Driesch 1976) GL 170 SD 11.92 Bp 44.06, Bd 32.07. Some lipping on the proximal articulation surface, might be the first stages of age related osteoarthritis.

1 Radius, left, fully fused.

1 Radius, right, fully fused.

1 Ulna, right.

2 innominate halves, fully adult.

1 Femur, left, fully fused. Biometrics (Von den Driesch 1976) GL 186, SD 11.82, Bp 40.94, Bd 30.73.

1 Femur, right, fully fused. Biometrics (Von den Driesch 1976) GL 185, SD 11.96, Bp 40.22, Bd 30.91

1 Tibia, left, fully fused.

1 Tibia, right, fully fused.

1 Astragalus, left.

1 Calcaneum, left.

1 Tarsal

3 Metapodials, broken.

20 Unrecognisable fragments.

Discussion:

The dog bones found in 2005 at Daðastaðir probably represent a single individual with a majority of its skeleton present. Most of the bones are quite well preserved and many of them show sign of root etching. The dog was mature, as can be seen from the complete stage of epiphysial fusion and quite heavy dental wear, especially on the carnassials and the incisors. Exostoses (new bone formation) can be seen on the proximal articulation surfaces of the humeri and is probably a sign of age related osteoarthritis. The shoulder height of the dog was ca 55-57 cm² and it was thus larger than the average individual of the modern Icelandic

² Based on regression equations from Harcourt (1974). R Femur: (3,14*185)-12,96=567,95, l femur: (3,14*186)-12,96=571,08, l humerus: (3,43*167)-26,54=546,27, r humerus (3,43*167)-26,54=546,27, l radius:

breed, which has a shoulder height of about 38-48 cm (depending on sex).

The dog's cranium is seriously fractured. The distal part of the brain cavity is completely broken of. The fracture line is mostly dark which points to breakage in antiquity. The fracture could have happened when the burial was robbed, but that seems unlikely because the zygomatic arch and the nasal cavity (both of which are more fragile parts of the cranium) are unbroken. Given the similar injury on the horse cranium, it is likely that the dog was slaughtered by being stricken on the head with a blunt instrument.

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