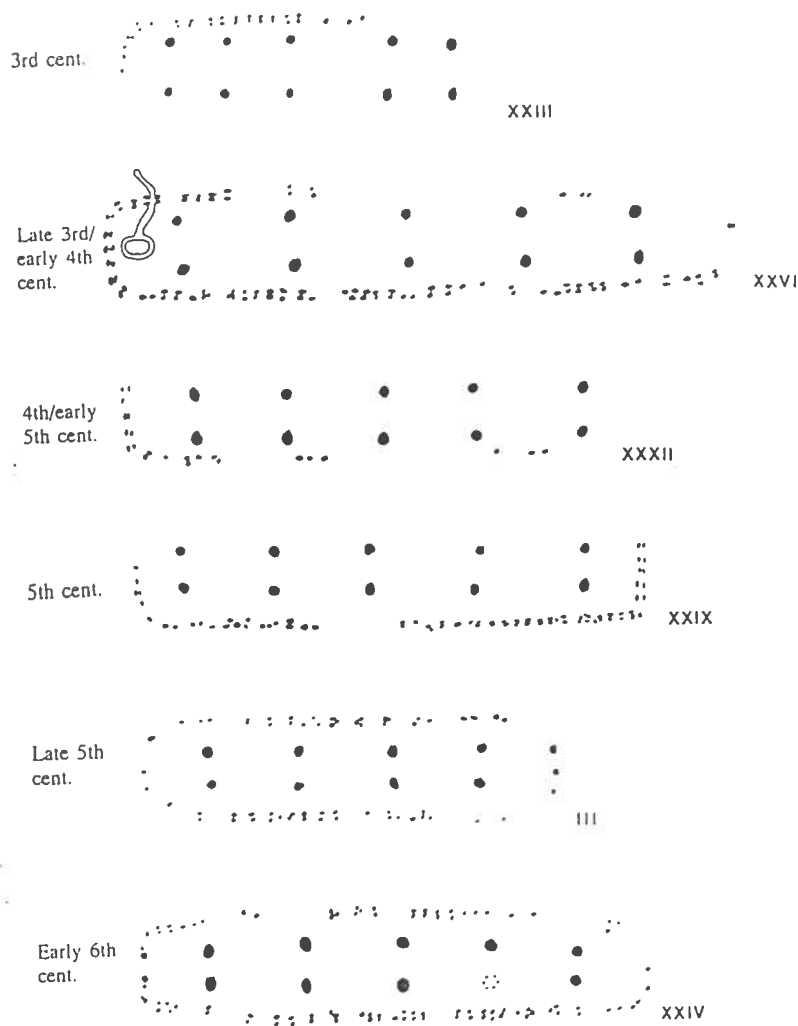


Analyse af arkæobotaniske materiale fra Gudme 3

NM j.nr. 6320/85, NNU j.nr. A6843

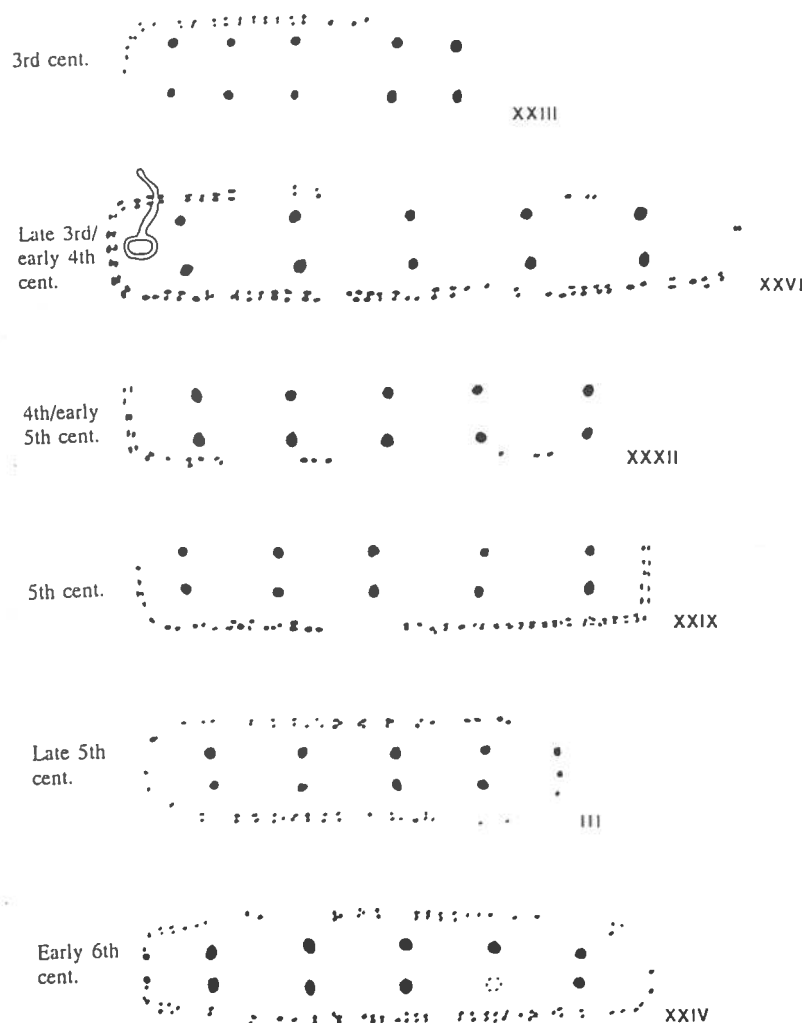
David E. Robinson og Jan A. Harild



NNU Rapport nr. 31 1997

**Analyse af arkæobotaniske materiale fra
Gudme 3
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det generelle billede vi har for resten af landet fra senromersk- og germansk jernalder (Robinson 1993).

Der er også enkelte fund fra udaterede (jernalder) anlæg af *Avena* sp (Havre), *Triticum dicoccum* (emmer), *Panicum miliaceum* (hirse) og *Linum usitatissimum* (alm. hør).

Indsamlede planter: Rester af mulige indsamlede planter omfatter hovedsagelig nøddeskalfragmenter af *Corylus avellana* (hassel). Der er også fundet et muligt frø fra *Humulus lupulus* (humle) samt et frø fra *Malus* sp (æble/pære).

Markukrudt/ruderatplanter: Der er kun relativt få ukrudtsfrø i de fleste prøver, dvs. for få til at man kan konkludere noget om dyrkningsteknikker osv. (jvf. Henriksen & Robinson 1996). Frø af *Chenopodium album* (hvidmelet gåsefod) samt af de forskellige *Polygonum* (pileurt) arter er de meste almindelige.

Ubestemt økologi: Der er spredte forekomster af frø der ikke kan tilknyttes et bestemt voksested enten fordi de er så dårligt bevaret at de ikke kan bestemmes til art, eller fordi de kommer fra arter der kan vokse i flere forskellige biotoper. De giver kun meget begrænsede oplysninger.

Andet: Mange af prøverne indeholder en del forkullet organisk materiale i form af klumper og flager uden karakteristisk overflade eller intern struktur. Herudover er der fundet stumper af keramik samt fragmenter af både brændte og ubrændte knogler.

Plantematerialet i prøverne stammer sandsynligvis fra hverdagsaktiviteter i og omkring husene - først og fremmest madlavning og bortskaffelse af affald (fremfor fra f.eks. tærskning og rensning af korn, idet der ikke er fundet videre tærskaffald i prøverne). I nogle enkelte tilfælde, hvor prøver indeholder relativt mange korn (f.eks. prøverne 7057 & 7120), kan der være tale om rester af opbevaret, færdigrenset korn. De mange forkullede frø af *Chenopodium album* (hvidmelet gåsefod) i prøve 7120 kan evt. også være rester af fødevarer fra et forråds-kammer (jvf. Henriksen & Robinson 1996). Ellers er det sandsynligt at de fleste ukrudtsfrø stammer enten fra ukrudt (dvs. forurening) i kornet eller fra planter der har vokset lige i nærheden af bebyggelsen. Knogleresterne (både brændte og ubrændte), keramikstumper samt de mange klumper og flager af amorf organisk materiale stammer sandsynligvis fra køkkenaffald og ildstederne.

Analysis of plant remains from Gudme 3, NM j.nr. 6320/85, NNU j.nr. A6843

Materials and methods

In all 71 samples have been investigated; these originate from postholes, pits, cooking pits, floor layers, burnt pits, cultural layers, a well and several unspecified contexts. On the basis of the archaeological dates they have the following distribution through time:

Archaeological date	number of samples
3 rd or 4 th century BC	5
3 rd century AD	8
4 th century AD	2
5 th century AD	20
5 th or 6 th century AD	5
6 th century AD	9
Undated (Iron Age)	22
Total	71

The samples were submitted by the excavators as floated and dried residues, i.e. flots (Robinson & Mikkelsen 1993). The size of the original samples is not given in all cases but lay generally between 2 and 5 litres. The weight of the individual dried flots should be treated with some caution as many of them contained quantities of mineral material (coarse and fine sand).

Small samples were generally analysed in their entirety, whilst larger samples were divided up into sub-samples, corresponding to a half or an eighth of the original sample, which were then analysed (see table). The identified remains and both sorted and unsorted sample residues are stored at NNU (see the archive file A6843).

Results

Both carbonised and uncarbonised plant remains were present in the samples, but only the former have been included in the table as the uncarbonised remains could be the result of later contamination (e.g. via earthworm burrows). The concentration of plant remains in the samples is generally too low for it to be possible to demonstrate differences between the various contexts or to follow developments through time. Samples from contexts dated to the 3rd - 4th centuries BC contain virtually no plant remains, whereas samples from contexts from the 3rd - 6th centuries AD, and from those which are undated, contain sufficient plant remains to provide information about which plants have been cultivated and exploited (see below).

Cultivated plants: Cereal remains in samples from the 3rd - 6th centuries AD comprise almost exclusively carbonised grains accompanied by occasional carbonised rachis segments. *Hordeum vulgare* var. *vulgare* (hulled barley) and *Hordeum* sp (barley) grains which cannot be identified further dominate the picture. Occasional grains of *Secale cereale* (rye), *Hordeum vulgare* var. *nudum* (naked barley) and *Triticum aestivum* (bread wheat) were also present. With the exception of emmer, this corresponds broadly to the picture we have for the rest of the country for the Late Roman and Germanic Iron Ages (Robinson 1993). There are also finds of *Avena* sp (Oat), *Triticum*

dicoccum (emmer), *Panicum miliaceum* (millet) and *Linum usitatissimum* (flax) in the samples from undated (Iron Age) contexts.

Gathered plants: Remains of possible gathered plants comprise nutshell fragments of *Corylus avellana* (hazel). A possible fruit of *Humulus lupulus* (hop) and a pip of *Malus* sp (apple/pear) have also been registered.

Arable weeds/ruderals: The majority of samples contain very few remains from this category, i.e. too few to enable conclusions to be drawn about agrarian practices etc. (cf. Henriksen & Robinson 1996). Nutlets of *Chenopodium album* (fat hen) and fruits of the various *Polygonum* (persicaria) species are the most common.

Unspecified habitat: There are some occurrences of seeds and fruits etc. which cannot be identified to species or which stem from species which grow in a wide range of habitats. These give only very limited information.

Miscellaneous: Many of the samples contain quantities of carbonised organic material in the form of clumps and flakes with no characteristic surface or internal structure. In addition, fragments of pottery and of both burnt and unburnt bone were registered.

The plant remains in the samples probably originate from everyday activities in and around the houses, primarily cooking and waste disposal (rather than from processing cereals - the quantities of possible processing waste in the samples are very small). In a few cases, where samples contain relatively large quantities of grain (e.g. samples 7057 & 7120), these may represent the remains of stored, processed cereals. The abundant nutlets of *Chenopodium album* (fat hen) in sample 7120 could also possibly be the remains of stored food (cf. Henriksen & Robinson 1996). Otherwise it seems very likely that most of the weed seeds originate from arable weeds in the cereals or from ruderal plants growing in and around the settlement. The bone remains (both burnt and unburnt), the pottery fragments and the many carbonised clumps and flakes of amorphous organic material probably come from kitchen waste and from the hearths.

Referencer

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GUDME 3 - j.nr. 6320/85 - NNU j.nr. A6843																		
Prøve nr.	Anlæg nr.	Sted/Lag	Datering	Prøve vægt/ undersøgt væg (floteret)	Dyrkede planter:			Hordeum vulgare var. nudum	Hordeum vulgare var. vulgare Avntklædt byg	Hordeum vulgare uspec. Byg	Hordeum vulgare uspec. Byg (aksled)	Linum usitatissimum Alm. hør	Panicum milleaceum Hirse	Secale cereale Rug	Triticum aestivum Brødhvede	Triticum dicoccum Emmer	Triticum sp. Hvede (aksdel)	Ubest. Korn
					Avena sp Havre	Hordeum vulgare var. nudum	Hordeum vulgare var. vulgare Avntklædt byg											
584	1776	Hus XIII - stolpespor	6 årh.	10,72g/10,72g				0,5*									1f*	
597	1754	Hus XVII	4 årh.	2,83g/2,83g													1f*	
599	1699	Br. grube		12,60g/6,30g								2*			1*		2* + 2f*	
600	1623	Hus XII - guilviag	3 årh.	9,72g/9,72g				0,5*										
601	1632	Hus XVII		mangler														
602	53	Hus II	6 årh.	25,30g/12,65g				8*										
603	1900	Hus XII	3 årh.	21,53g/21,53g					3*								4* + 2f*	
604	1899	Hus ?		23,12g/11,56g													1,5* + 5f*	
605	1912	Hus XII	3 årh.	27,5g/13,75					1*								1*	
606	1712	Brønd	6 årh. ?	65,92g/16,48g				0,5*										
608	1771	Hus XIII - stolpespor	6 årh.	4,92g/4,92g				1*	3*				1*				2* + 3f*	
7041	2499	Grube - pr. af træk. str.		13,0g/12,9g													0,5* (aksdel)	
7043	2612	Hegn - stolpespor	5 årh.	8,39g/8,39g					2*								1*	
7044	3048	Hus XXV	5/6 årh.	15,76g/3,94g													1* + 1f*	
7045	3102	Koge grube m. glas	5 årh.	35,36g/8,84g					1*								5f*	
7048	3223a	Koge grube	5 årh.	46,76g/11,69g														
7049	3236	Hus XXIV	6 årh.	7,30g/7,30g					2,5*								6f*	
7050	3247	Koge grube		28,72g/7,18g														
7051	3308	Koge grube		25,80g/6,45g													1f*	
7054	3763	Hus XXXV - stolpespor	3 årh.	29,28g/14,64g				2,5*									2f*	
7055	3786	Hus XXXV - stolpehul m. glas	3 årh.	16,56g/8,28g				2*									3* + 2f*	
7056	3819	Koge grube		21,72g/5,43g														
7057	130	Hus II	6 årh.	37,52g/9,38g				106* + 20f*	24,5* + 1f*								ca. 70*	
7058	266	Hus I	5 årh.	6,5g/6,5g													2f*	
7060	283			16,5g/16,5g														
7061	287	Hus I	5 årh.	17,8g/17,8g				1*									1*	
7063	373	Hus III	5 årh.	47,04g/23,52g				3*									3* + 13f*	
7064	422	Hus III	5 årh.	0,9g/0,9g				1*	4,5*					1*			0,5*	
7065	558			13,0g/13,0g													2*	
7066	373	Hus III	5 årh.	41,7g/41,7g										1*				
7067	585			29,2g/29,2g				1* + 1f*										
7068	841	Hus V	5 årh.	4,1g/4,1g				12,5*						3*				
7069	1193			2,1g/2,1g														
7071	1208	Hus V	5 årh.	1,22g/1,22g				1*									1f*	
7072	1230	Hus X	5 årh.	10,4g/10,4g														
7073	1381	Hus V	5 årh.	1,4g/1,4g														
7075	1404	Hus V	5 årh.	4,62g/4,62g					1*								1f*	
7076	1431	Hus V	5 årh.	47,2g/47,2g					2*									
7082	1951	Grube	3/4 årh. f.Kr.	14,0g/14,0g														
7083	1951	Grube	3/4 årh. f.Kr.	1,9g/1,9g														

Prøve nr.	Anlæg nr.	Indsamlede planter:		Markkrudt/Ruderatplanter:		Capsella b.-p./ Hydrataste/ Vejsennep	Chenopodium album	Euphorbia helioscopia	Plantago lanceolata	Polygonum aviculare	Polygonum convolvulus	Polygonum laphatit./persic.	Polygonum Bleg./Fersken-Pileurt	Polygonum persicaria	Rumex acetosella
		Corylus avellana	Cf. Humulus lupulus	Malus sp Æble/ Pære	Arrhenatherum elatior var. bulbosum										
584	1776														
597	1754														
599	1699	1*													
600	1623														
601	1632														
602	53		1*									1*			
603	1900														
604	1899						2*								
605	1912														
606	1712	1*													
608	1771														
7041	2499														
7043	2612														
7044	3048														
7045	3102														
7048	3223a														
7049	3236														
7050	3247														
7051	3308														
7054	3763														
7055	3786														
7056	3819														
7057	130						3,5*								1*
7058	266														
7060	283														
7061	287														
7063	373														
7064	422														
7065	558														
7066	373	21*													
7067	585														
7068	841														
7069	1193														
7071	1208														
7072	1230	3*													
7073	1381	1*													
7075	1404				0,5*										
7076	1431	4*													
7082	1951	13*													
7083	1951	8*													

Prøve nr.	Anlæg nr	Polygonum sp Pileurt	Ranunculus s Ranunkel	Rumex sp. Skræppe	Scirpus sp. Kogleaks	Scieranthus sp. Knavel	Senecio sp. Brandbæger	Stellaria sp Fuglegræs	Trifolium sp Kløver	Cl. Vicia sp Vikke	Vicia sp Lathyrus sp. Vikke/Fladbæg	Andet: Brændt org. mat. klumper	Keramik/Knogler	Knoppe	Stråfragmt	Ubest. frø.
7084	1951															
7085	1951															
7086	1951															
7095	1991															
7095	1991															
7099	2006															
7102	2095															
7103	2165							1*				3*				2f*
7104	2165															
7105	2165												1f			1f*
7108	2193												1f	1*		
7110	2213 b							1*								
7113	2244															
7115	2297															
7117	2297			1*												
7119	2316									1*						
7120	2316															
7121	2316															
7122	2424															
7123	2424															
7124	2429															
7125	2429												6f			
	3820															
	3820	1*														
	3820							1*	1*							
	3820										3*					
	3820															
	3820															
	3820															
	2518												2f			1*
	853															
	3502															1*