Field report for the excavation at Ø49 (KNK 6010) in 2021.

GSR-1 no. 2021-1

Peter Steen Henriksen – National Museum of Denmark

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Project abstract:
The Activating Arctic Heritage-project WP 3.2: "Plant Resources in Norse Society" addresses the plant food intake of the Norse. The plant based component in their overall diet is only sporadically known. This work package will try to fill this knowledge gap by investigating the cultivation and importation of cereals and vegetables, as well as the collection wild indigenous plant resources. The work package is based on the analyses of macrofossils (preserved plant remains) in combination with pollen and isotope analyses of soil samples taken at excavations of midden deposits at Norse farms.

Period of field work: 9-24/8-2021
Participants: Sasha Krüger, Frederikke Reimer, Peter Steen Henriksen (PI), Catherine Jessen, Kaylee Baxter & Rikke Dahl Olsen (Picture on front page)

Excavation area:
In the project parts of a midden at Ø49 north of Igaliku was excavated. The location of Ø49 and the site plan can be seen in fig. 1.

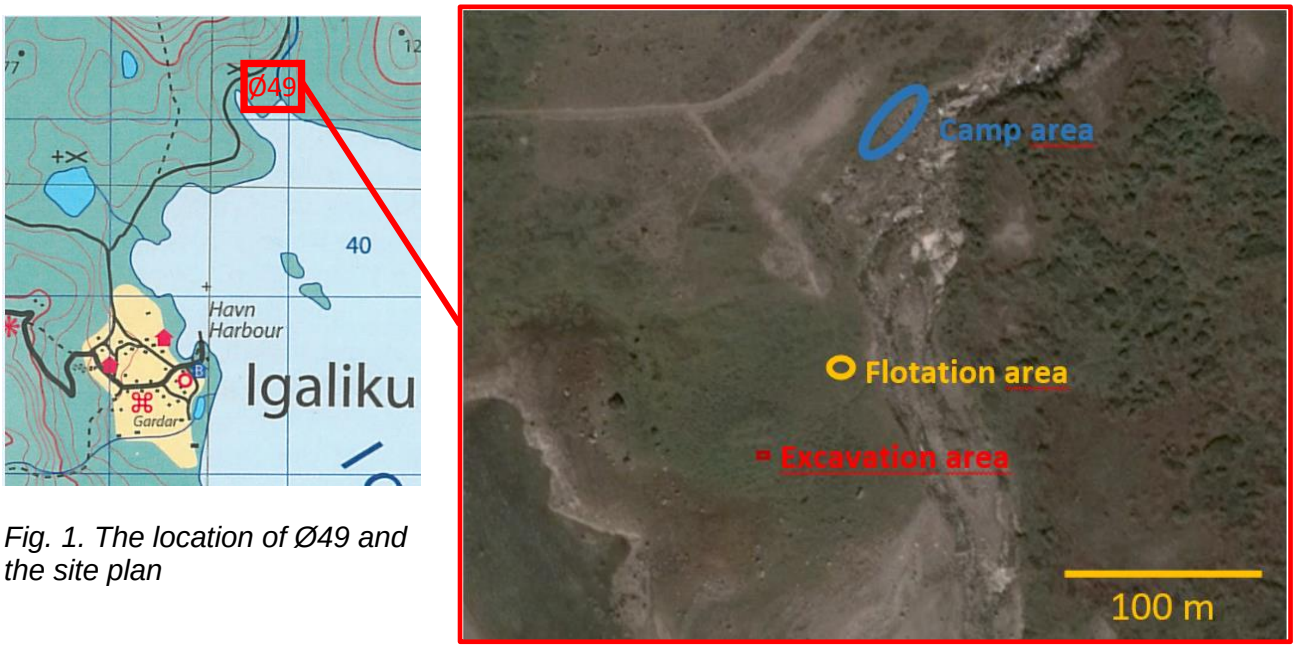

Fig. 1. The location of Ø49 and the site plan

The excavation:
An area of 1 x 2 m was excavated to the sub soil. The midden layer was 50-60 cm thick in the majority of the excavated area but varying from 40-75 cm due to an uneven subsoil surface and heavy erosion of parts of the top layer (fig. 2). This erosion is caused by occasional flooding of the area by the river situated east of settlement area.
The midden was excavated in 5 cm layers as there were no visible layer structures. Due to the erosion of the top layer, especially in the eastern end of the excavation, the 0-line had to be established lower than the upper parts of the midden layer.

Fig. 2. The excavation seen from north.

The midden layer above the 0-line was 0-12 cm thick and was taken as one sample (top layer). The bottom sample 50-55 included material from smaller areas were the midden layer reached further down.
From the top layer and from each of the layers 0-5 cm to 20-25 cm, 30 liters of soil was flotated. From the underlying layers all material (aprox.100 liters/layer) was flotated (fig. 3).

Fig. 3. Flotation of the soil from the midden excavation.

After the excavation and the flotation of the soil samples, the soil was backfilled in the excavation. Prior to the backfilling the bottom and corners of the excavation trench was marked with red/white plastic bands. Before the replacement of the grass turfs a layer of yellow sand from the river bank was places on top of the backfilled midden material making it easier to identify the excavation trench in the future (fig. 4).

Fig. 4: The yellow sand layer placed immediately under the grass turfs.

Fig. 5. The excavated area after the backfilling.

Sample collection:
The macrofossil samples were taken from 12 layers (fig. 6) resulting in approx.120 liters of charcoal and other plant remains and a lot of modern roots (fig. 7 & appendix 1).
13 pollen samples were taken from the southern profile and a column was taken for loss of ignition analysis (LOI) and lipid analysis (fig. 6).
Soil, water and vegetation samples were taken in three areas around the settlement area for Strontium isotope baselines.

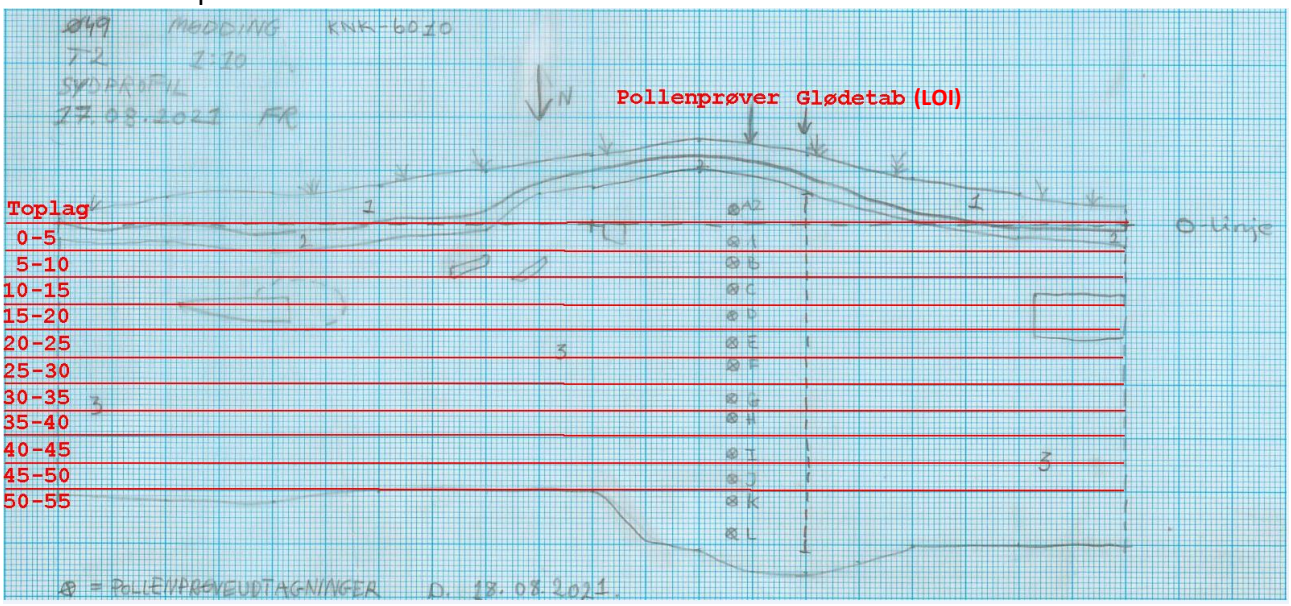

Fig. 6. The south profile with layer numbers and the pollen- and LOI-samples shown.

Fig. 7. The macrofossil samples.

Artefacts from the excavation:

During the excavation a few artefacts were found (fig. 8 & appendix 1). Sherds of soapstone were found in 6 layers and a few pieces of iron nails, 1 piece of lead and 2 pieces of copper were found using a metal detector and a strong neodymium magnet. These artefacts have been returned to NKA.

Most bones were almost totally degraded (butterbones) but a few pieces from each layer could be sampled. These will be identified (if possible) by Anne Birgitte Gotfredsen (University of Copenhagen).

Fig. 8. Nail heads, lead, soapstone and a bone from the excavation at Ø49.

KNK number	Project or Site Name	Year of project or investigation	Excavation Director	Storage no.
6010	AAH 3.2, Ø49	2021	Peter Steen Henriksen	NKA will fill out
NKAH No.	2252/55		National Museum of Denmark	

X-number	Excavation Unit	Context	Material type	Object Descrip.	Obj. details	Artifacts (n)	Length (cm)	Width (cm)	Height (cm)	Weight (g)	Ini	Date
x1	20-25 cm	Norse midden	Iron	Nail fragments?		2	3-5	2-3			PSH	08-11-2021
x2	20-25 cm	Norse midden	Steatite	Sherds		5	3-6	2-3	1-1½		PSH	08-11-2021
x3	25-30 cm	Norse midden	Iron	Nail heads		2	1-2	1-2			PSH	08-11-2021
x4	25-30 cm	Norse midden	Steatite	Sherds		4	3-7	2-5	½-1		PSH	08-11-2021
x5	30-35 cm	Norse midden	Iron	Nail fragments and unidentied pieces		5	1-3	1-2			PSH	08-11-2021
x6	30-35 cm	Norse midden	Steatite	Sherds		3	4-7	3-5	1-3		PSH	08-11-2021
x7	30-35 cm	Norse midden	Lead	Casting refuse		1	3	1	1		PSH	08-11-2021
x8	40-45 cm	Norse midden	Iron	Nail fragments and unidentied pieces		5	1-3	½-1			PSH	08-11-2021
x9	40-45 cm	Norse midden	Steatite	Sherds		6	2-6	1-5	½-2		PSH	08-11-2021
x10	45-50 cm	Norse midden	Iron	Cramp and unidentied piece		2	2-3	½-1½			PSH	08-11-2021
x11	45-50 cm	Norse midden	Copper	bar		1	3	0,3	0,3		PSH	08-11-2021
x12	45-50 cm	Norse midden	Steatite	Sherds		2	4-5	1-4	1-1½		PSH	08-11-2021
x13	50-55 cm	Norse midden	Iron	Nail fragments and unidentied pieces		2	1-3	1-2			PSH	08-11-2021
x14	50-55 cm	Norse midden	Steatite	Sherds		1	3	2	½		PSH	08-11-2021
x15	Backfill	Norse midden	Iron	Nail fragments and unidentied pieces		2	2-3	0,3-1½			PSH	08-11-2021
x16	Backfill	Norse midden	Copper	Fragment from jewellery ?	also contains Arsen and Lead	1	1	1	0,1		PSH	08-11-2021

Sample number	Excavation Unit	Context	Sample type	Amount (ltr., weight etc.)	Ini	Date
Top layer	Top layer	Norse midden	Flotation sample	5 l.	PSH	08-11-2021
0-5 cm	0-5 cm	Norse midden	Flotation sample	5 l.	PSH	08-11-2021
5-10 cm	5-10 cm	Norse midden	Flotation sample	5 l.	PSH	08-11-2021
10-15 cm	10-15 cm	Norse midden	Flotation sample	5 l.	PSH	08-11-2021
15-20 cm	15-20 cm	Norse midden	Flotation sample	5 l.	PSH	08-11-2021
20-25 cm	20-25 cm	Norse midden	Flotation sample	5 l.	PSH	08-11-2021
25-30 cm	25-30 cm	Norse midden	Flotation sample	15 l.	PSH	08-11-2021
30-35 cm	30-35 cm	Norse midden	Flotation sample	15 l.	PSH	08-11-2021
35-40 cm	35-40 cm	Norse midden	Flotation sample	15 l.	PSH	08-11-2021
40-45 cm	40-45 cm	Norse midden	Flotation sample	15 l.	PSH	08-11-2021
45-50 cm	45-50 cm	Norse midden	Flotation sample	15 l.	PSH	08-11-2021
50- 55 cm	50- 55 cm + bottom	Norse midden	Flotation sample	15 l.	PSH	08-11-2021