**Appendix VII. Raw data of plant microfossils, followed by summaries of lipid residue analyses.**

# Neustadt EBK N_162

**Ceramic features**


**Description:**

**Interior view. Rim of a pointed-based vessel.**

**Exterior view**

*SURFACE DEPOSIT_S*

**Low powered microscopy**

**No features visible**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_262

**Ceramic features**

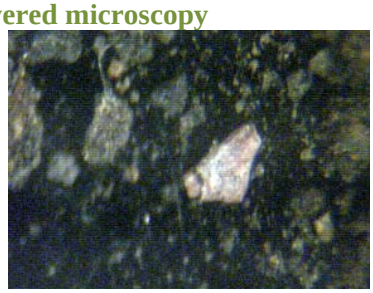
**Description:**

**Exterior view.**

**Interior view.**

## *SURFACE DEPOSIT_F*

**Low powered microscopy**



**Description**

**The image to the left shows a possible unidentifiable bone fragment at a magnification of x40.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_629

**Ceramic features**

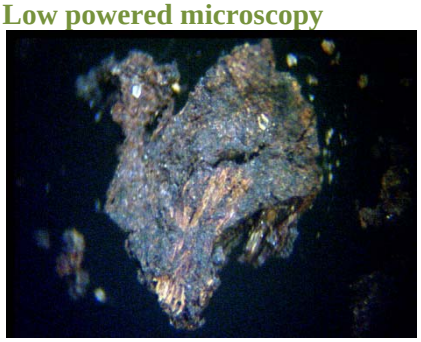
**Description:**

**Interior view.**


**Exterior view.**

## *SURFACE DEPOSIT_F*

**Low powered microscopy**

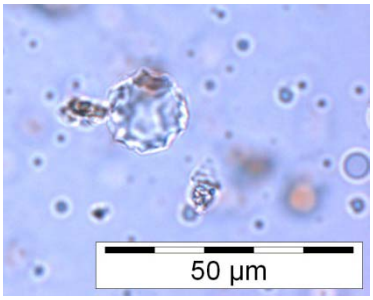


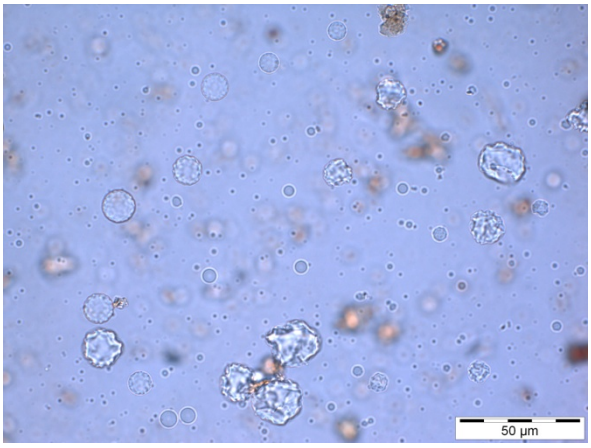
**Description:**

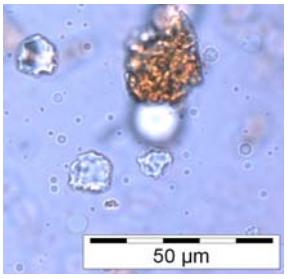
**This image shows a possible piece of bone embedded in the carbonised matrix. The light brown structure is arranged with a longitudinal grain. The photo is taken at a magnification of x40.**

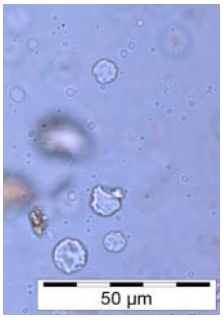
**Starches**

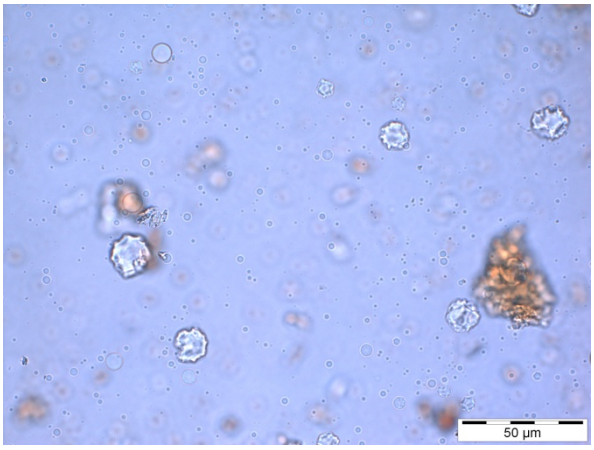

## Phytoliths




50 µm


50 µm

# Neustadt EBK N_1009

**Ceramic features**


**Description:**

**Exterior view. Portion of a lamp.**

**Interior view.**

## *SURFACE DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Neustadt EBK N_1025

**Ceramic features**

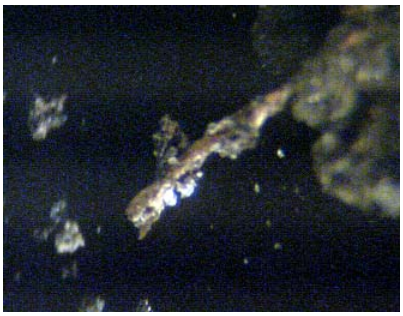

**Description:**

**Interior view. Decorated rim of pointed-based vessel.**

**Exterior view.**

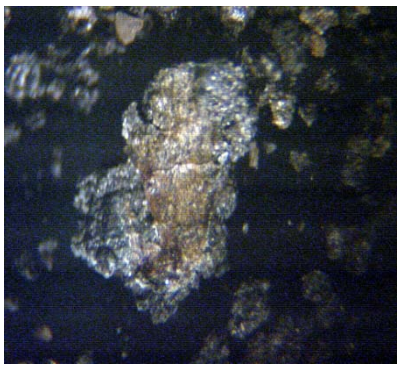
## *SURFACE DEPOSIT_S*

**Low powered microscopy**



**Description:**

**This image shows a possible leaf stalk or more likely a fish bone. Taken at a magnification of x40.**



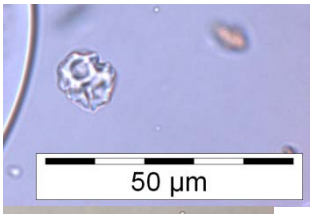
**To the left we have a possible fish scale of an unknown species. Although not clearly visible from the image the scale displays a concentric 'fingerprint' pattern consistent with one of the Salmonid family, though inconclusive. The photo is taken at x40.**

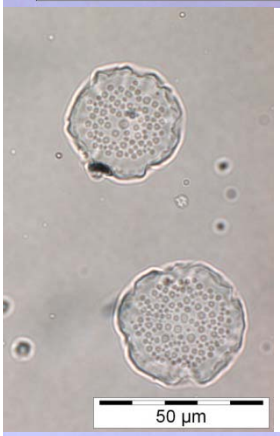
**Starches**

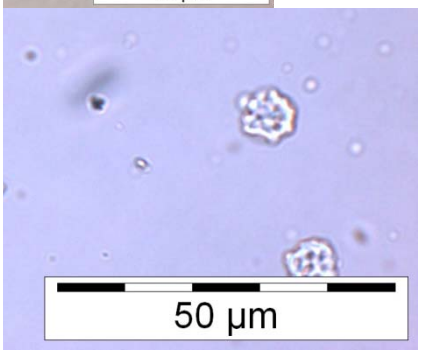
## Insignificant quantities

**Phytoliths**

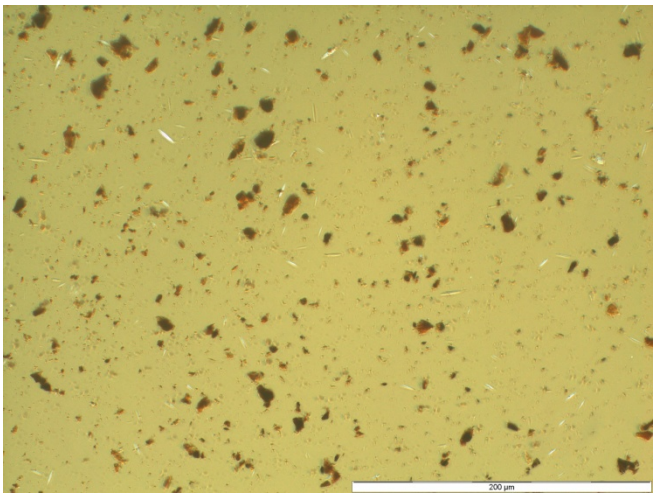
Description



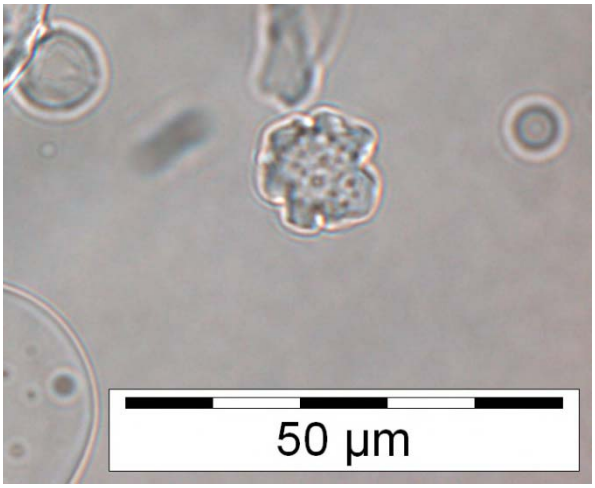




Insignificant quantities, but there are a number of distinctive silica body types evident, illustrated left.




Raphides


50 µm

# Neustadt EBK N_1193

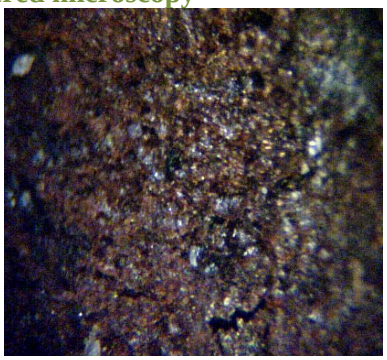
**Ceramic features**

**Description:**

**Interior view of sherd with surface deposit.**

## *SURFACE DEPOSIT_F*

**Low powered microscopy**



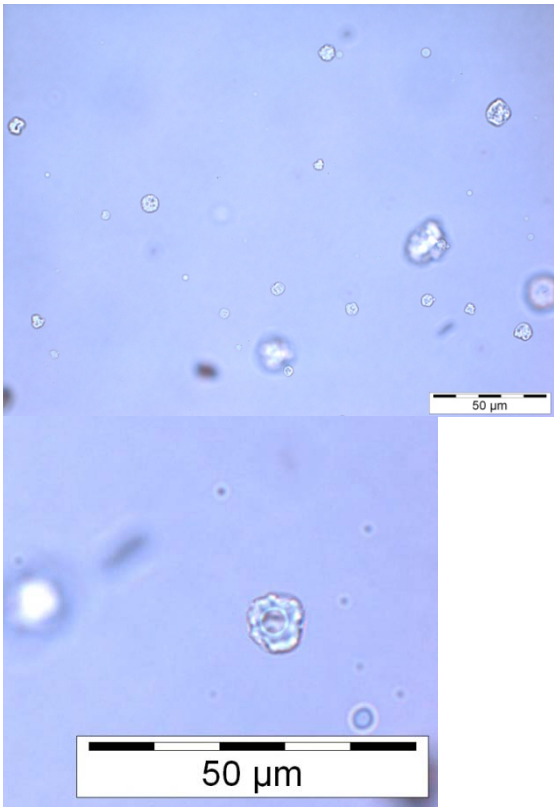
**Description:**

**This is a character shot taken at x40 to illustrate the unusual porous brown structure of the carbonised residue at low magnifications.**

**Starches**

**Insignificant quantities**

**Phytoliths**


50 µm
50 µm

# Neustadt EBK N_1317

**Ceramic features**

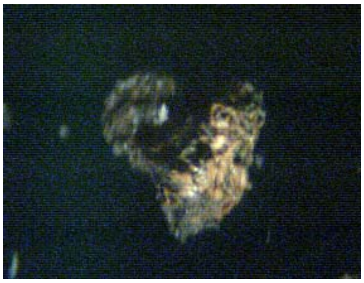
**Description:**

**Interior view.**


**Exterior view.**

## *SURFACE DEPOSIT_F*

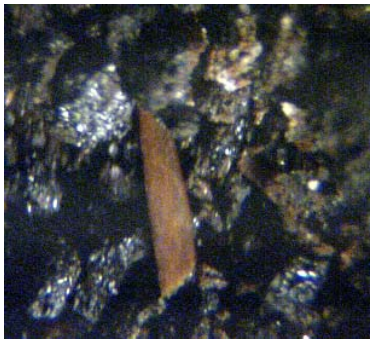
**Low powered microscopy**



**Description:**

**An unidentified bone structure at x40.**

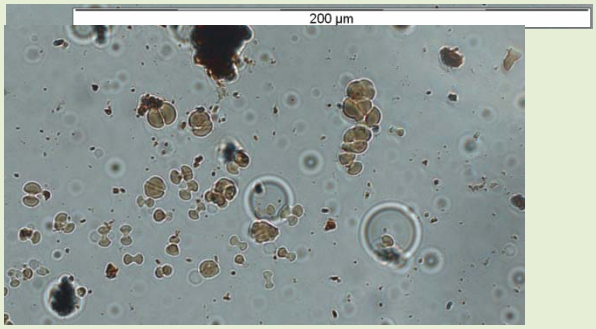
**An unidentified bone structure at x40.**



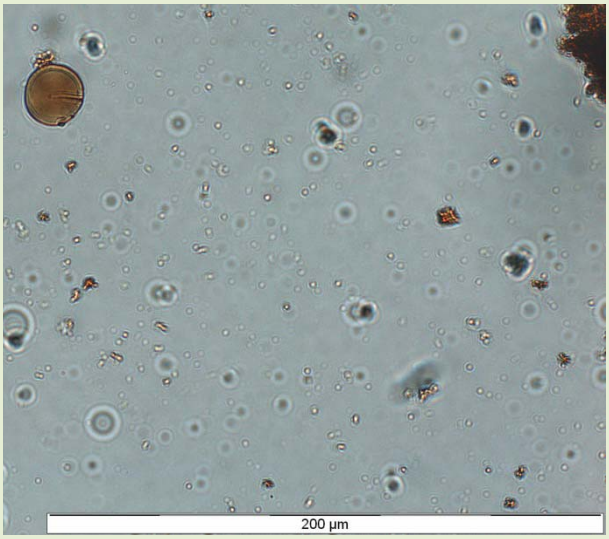
**An unidentified piece of bone at x40.**

## Starches

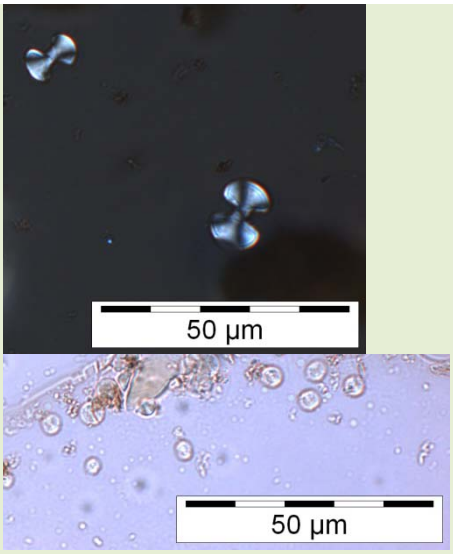
Description:




Bean shaped starches in a variety of sizes.




This image shows a retrograded round starch grain.




**Phytoliths** Description:

**Insignificant quantities**

# Neustadt EBK N_1682

**Ceramic features**


**Description:**

**Interior view.**

**Exterior view.**

## *SURFACE DEPOSIT_S*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_1919

**Ceramic features**

**Description:**

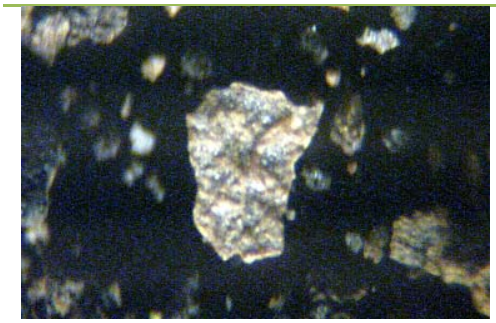
**Interior view.**


**Exterior view.**

*SURFACE DEPOSIT_F*

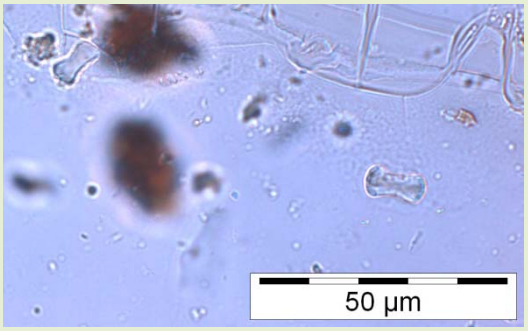
**Low powered microscopy**

**Description:**



An unidentified piece of possible bone or fish scale. Magnification x40.

**Starches**




**Phytoliths**

Insignificant quantities

# Neustadt EBK N_2285

**Ceramic features**

**Description:**

**Interior view.**

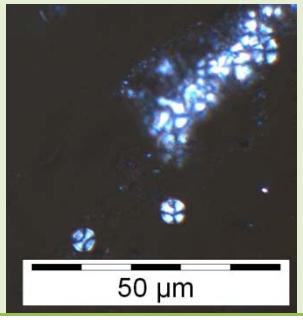

**Exterior view.**

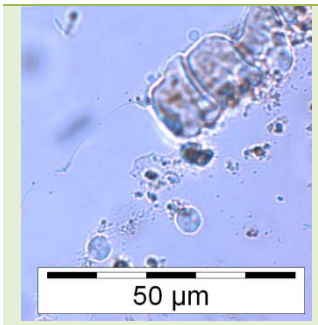
## *SURFACE DEPOSIT_F*

**Low powered microscopy**

**No features recorded**

**Starches**



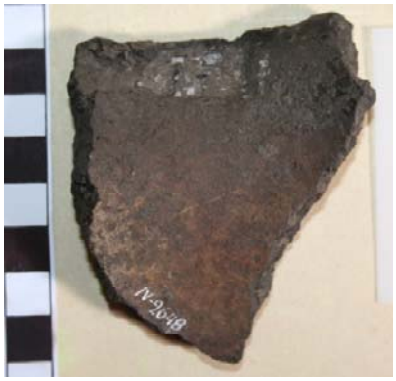



**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_2648

**Ceramic features**



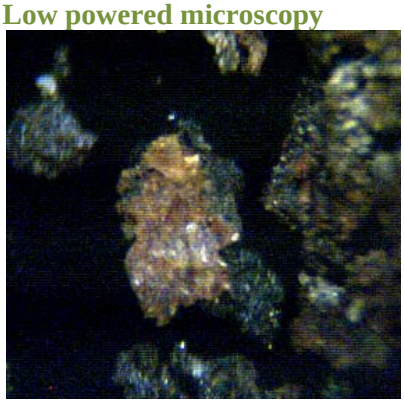

**Description:**

**Interior view.**

**Exterior view.**

## *SURFACE DEPOSIT_F*

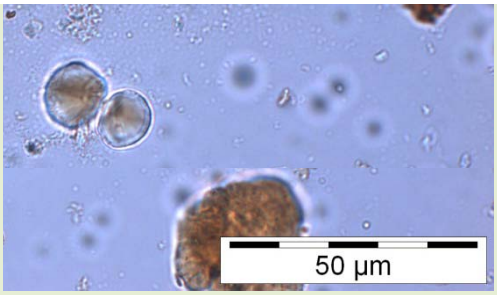
**Low powered microscopy**



**Description:**

**A probable piece of fish scale adhering to the carbonised deposit. The fragment is too small to identify the type of surface patterning so further identification is not possible. Magnification x40.**

**Starches**




**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_2756

**Ceramic features**


**Description:**

**Interior view.**

**Exterior view.**

## *SURFACE DEPOSIT_F*

**Low powered microscopy**

**Description:**

**To the left is a possible piece of unidentified bone extracted from the residue. Magnification x40.**

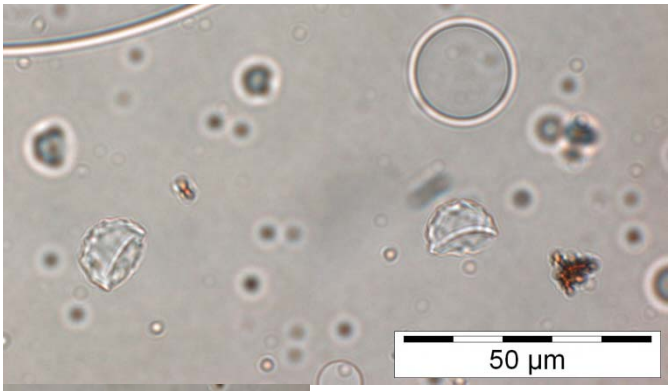
**This image shows a piece of probable fish scale. At this magnification it is difficult to see the surface which exhibited**

**concentric raised rings, a bit like a 'fingerprint'. These suggest the fragment may originate from a fish of the Salmonid family. Magnification x40.**

## Starches

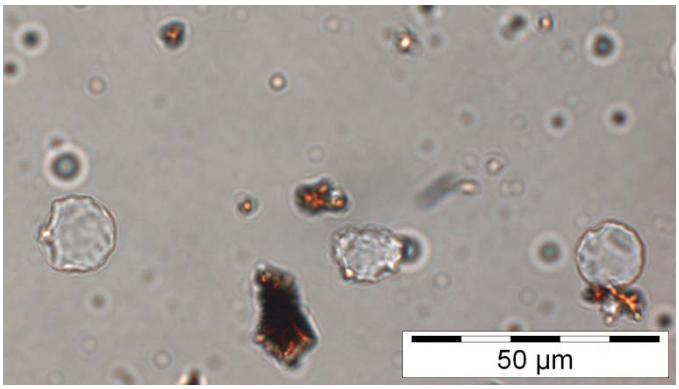

Bean-shaped granule.

## Phytoliths

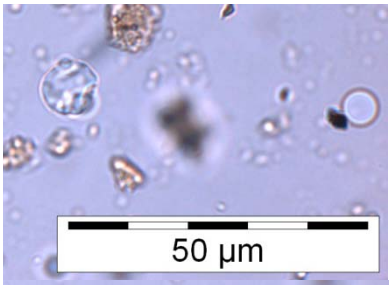


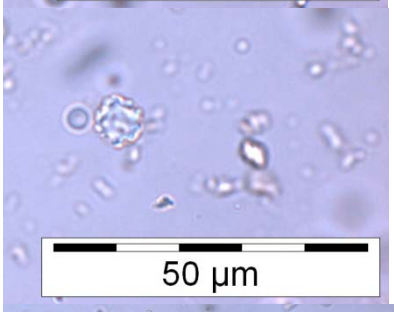

To the left are examples of the half-moon shaped phytoliths with an irregular surface. The size range of these silica bodies was small based on the recorded archaeological examples.


These silica bodies are irregular shaped despite being roughly oval. They are consistent with modern reference storage organs, possibly acorn.




These silica bodies are roughly spherical although with notched edges.



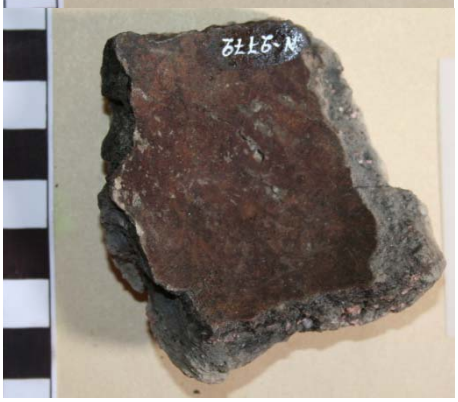




# Neustadt EBK N_2772

**Ceramic features**

**Description:**

**Exterior view.**




**Interior view.**

## *SURFACE DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_3020

**Ceramic features**


**Description:**

**Exterior view.**

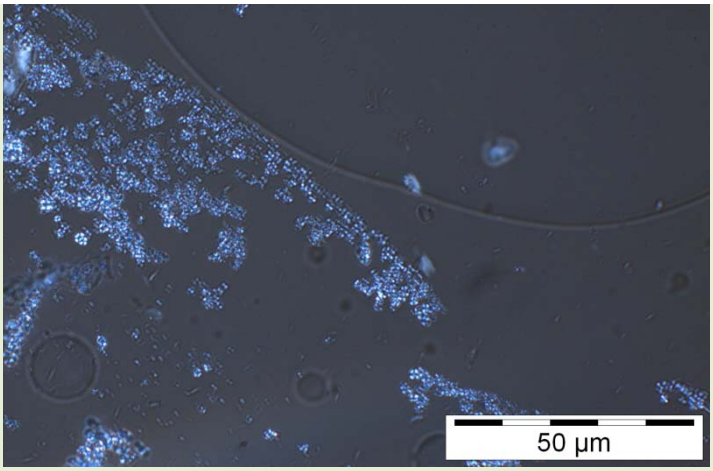
**Interior view.**

*SURFACE DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Starches**




**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_3148

**Ceramic features**

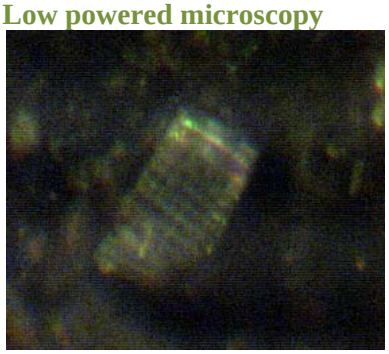
**Description:**

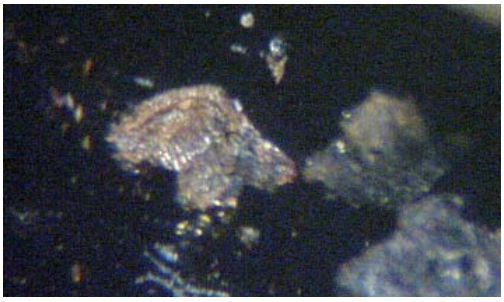
**Exterior view.**

**Interior view.**

## *SURFACE DEPOSIT_F*

**Low powered microscopy**



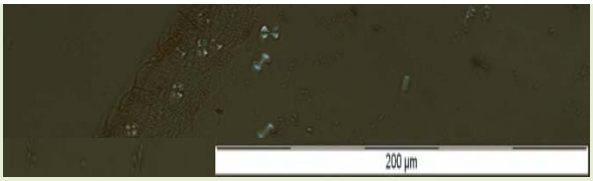


**Description:**

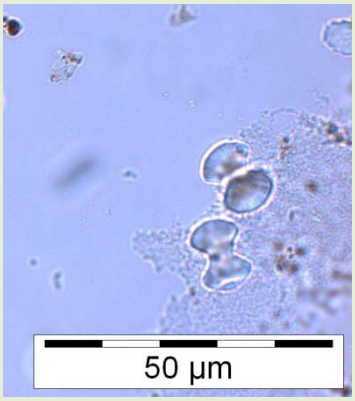
**The structure to the left exhibited a 'checkerboard' pattern, and was partially translucent. It is possible that this is a well-preserved silica skeleton, a collection of cells outlined by silica. Bozarth (1992, fig 10.5a) illustrates a similar 'opaque perforated platelet' structure. Magnification x40.**

**This is a possible degraded fish scale. Magnification x40.**

**Starches**




Small examples of the bilobate, ‘bow-shaped’ starches.




**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_3201

**Ceramic features**

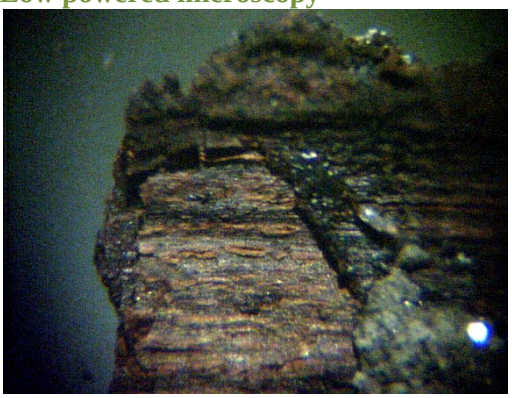

**Description:**

**Interior view.**

**Exterior view.**

## *SURFACE DEPOSIT_S*

**Low powered microscopy**



**Description:**

**To the left is an image of the bark structure at a magnification of x40. The pointed oval orifices in light brown that run horizontally along the structure are identified as vascular spaces that confirm the structure as bark cambium. The dark, shiny matter adhering to the right side of the residue piece is suggested to be resin/tar.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt EBK N_3304

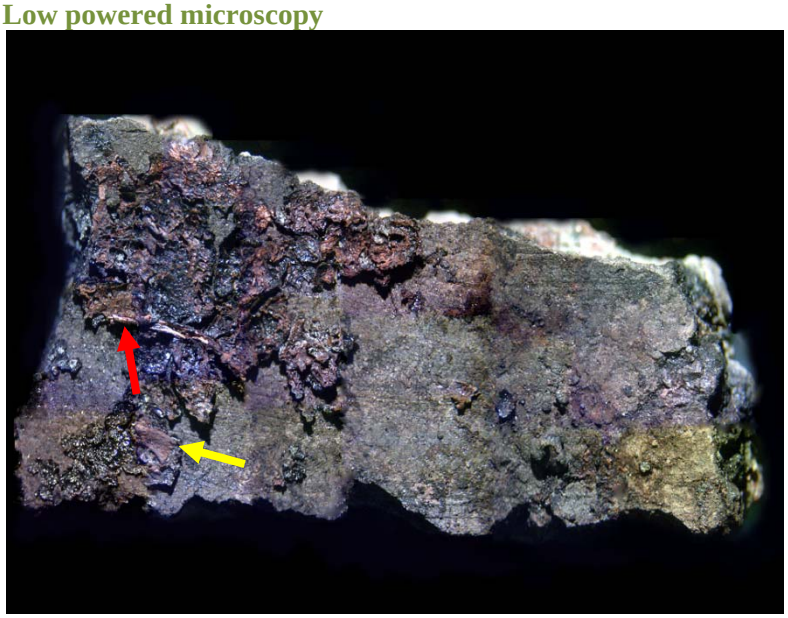
**Ceramic features**

**Description:**

**Interior view.**

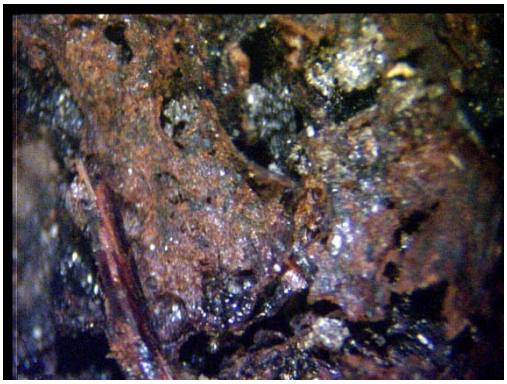
## *SURFACE DEPOSIT_F*

**Low powered microscopy**

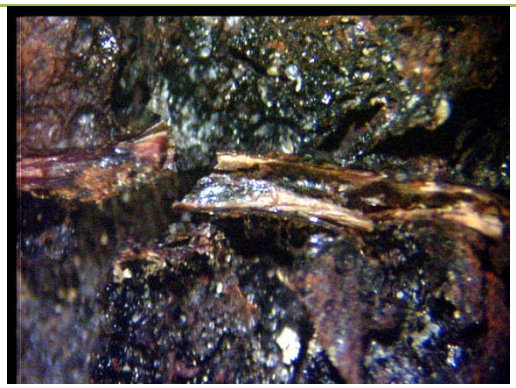


**Description:**

**This is an image of sherd 91, part of vessel 3304. The red arrow indicates a possible fish bone embedded in the residue. The matrix surrounding the artefact is possible leaf matter.**
**The yellow arrow indicates an embedded possible bone fragment (x10 magnification).**

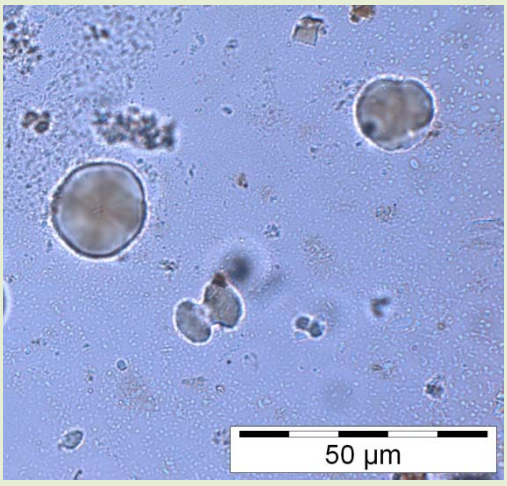


**This image is a close-up on the possible leaf matter mentioned above (x25 magnification).**



**This image is a close-up on the fragment of a probable fish bone embedded in the carbonised matrix (x25 magnification).**

**Starches**

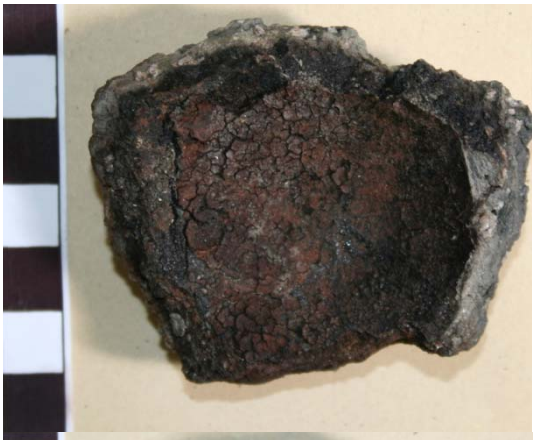



**Phytoliths**

**No distinctive silica bodies.**

# Neustadt EBK N_3305

**Ceramic features**



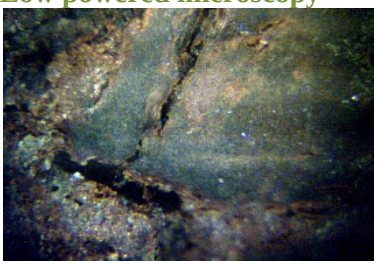
**Description:**

**Interior view.**


**Exterior view.**

## *SURFACE DEPOSIT_F*

**Low powered microscopy**

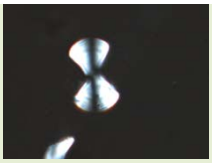


**Description:**

**The structure to the left is an unidentified adherence to the carbonised residue. It appeared to be a thin black/brown layer. It seems unlikely to be a fish scale because there is no evident surface patterning. Possibly it is carbonised leaf matter, or a film left after the separation of foodstuffs upon cooling. Magnification x40.**

**Starches**

A large rounded starch grain, x600.



A bean shaped granule, x600.

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_22

## Ceramic features

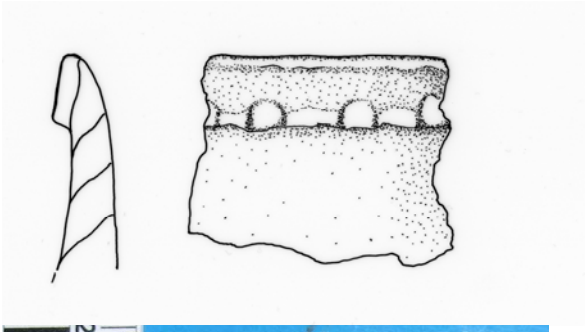


Illustration of the decorated rim edge and profile at a scale of 3:4. Illustration by K. Glykou.

Interior view. The rim is an arcade style, impressed with a band of clay on the exterior of the vessel. This is a feature characteristic of the Michelsberg Culture in south-central Germany.

Exterior view.

## *INTERIOR DEPOSIT_F*

## Low powered microscopy

**No recorded features.**

| | |
|---|---|
| **Starches** | |
| | **Insignificant quantities** |
| **Phytoliths** | |
| | **Insignificant quantities** |

# Neustadt TRB N_217

**Ceramic features**

**Description:**

**Interior view. Decorated rim sherd of a Funnel Beaker.**

**Exterior view.**

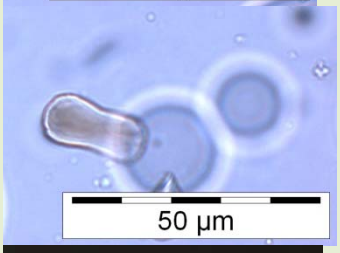
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

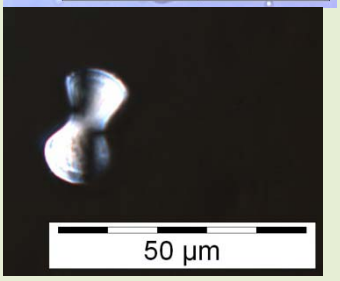
**No recorded features.**

**Starches** Description:


Oval starch granule.

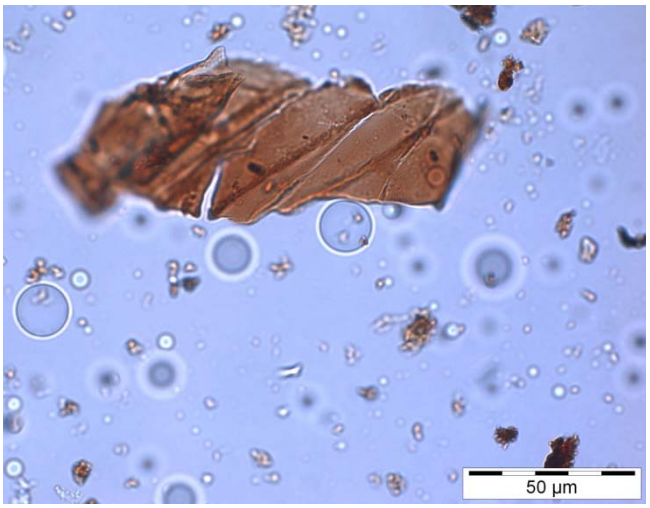



Oval starch granule.




Bean-shaped granule.

## Phytoliths




Silica skeleton.

# Neustadt TRB N_387

**Ceramic features** **Description:**

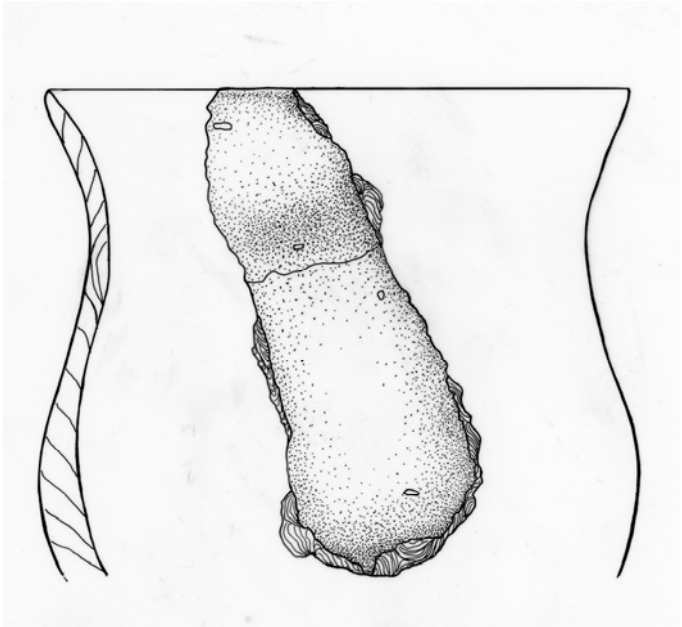


**Illustration of the funnel beaker from which sherd 387 originates. Image by K. Glykou.**

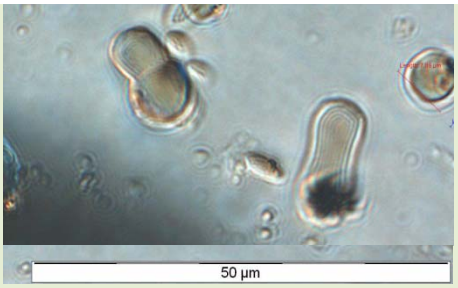
**Exterior view. The sherd is from the same vessel as sample N_386.**

## *INTERIOR DEPOSIT_F*

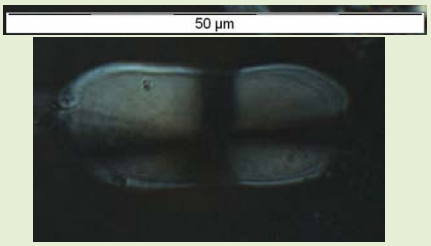
**Low powered microscopy** **Description:**

**No recorded features.**

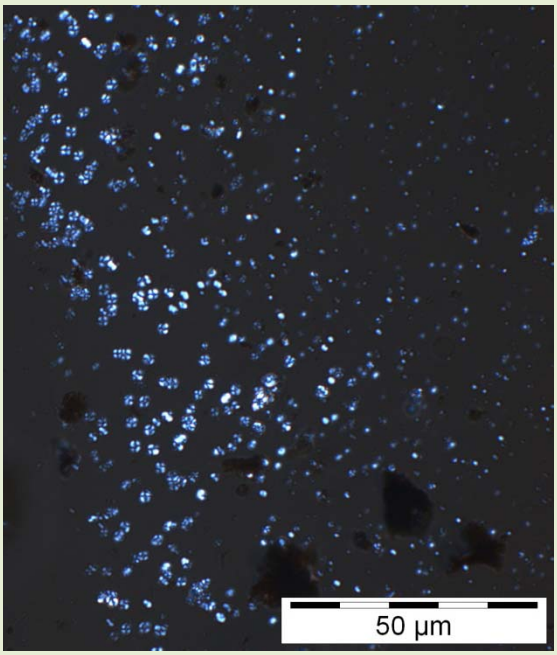
**Starches**




To the left we can see examples of oval granules.

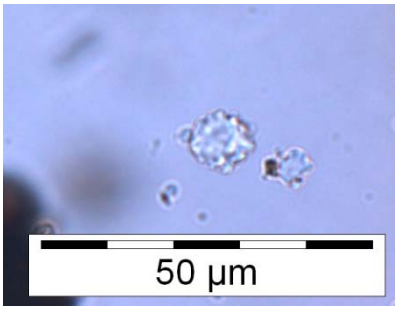



An larger example of the oval granule, in polarised light.

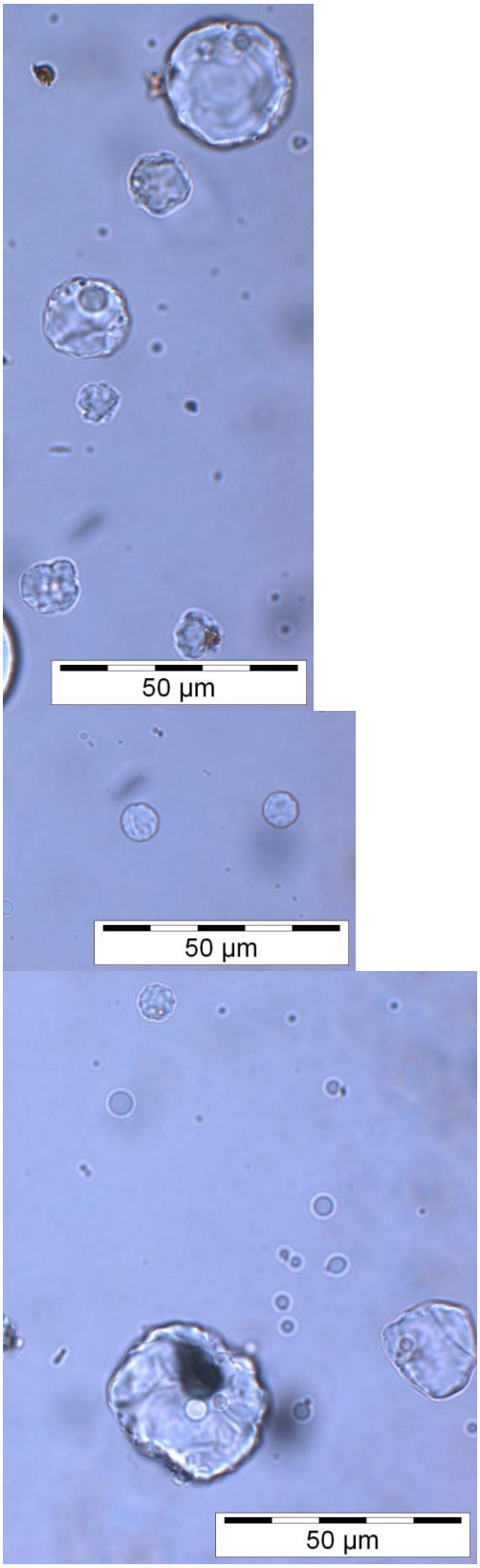


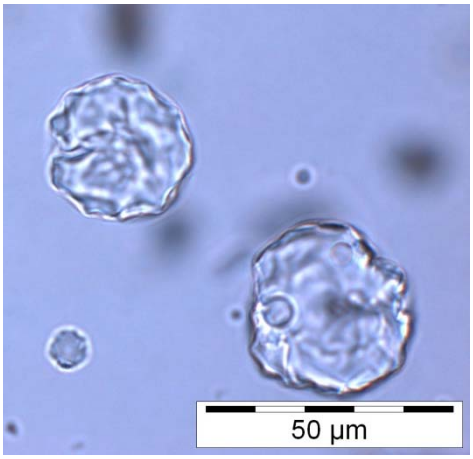

Multiple small, round granules.

## Phytoliths




There are insignificant quantities to rule out contamination, but many of the phytolith types are quite distinctive and are illustrated below.


50 µm
50 µm
50 µm


50 µm

# Neustadt TRB N_441

**Ceramic features**

**Description:**

**Exterior view. Decorated rim of a lugged beaker. Sherd is from the same vessel as sample N_442.**

**Interior view.**

## *SURFACE DEPOSIT_S*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_451

**Ceramic features**

**Description:**

**Interior view. Sherd of a medium sized Funnel Beaker.**

**Exterior view.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_1456

**Ceramic features**

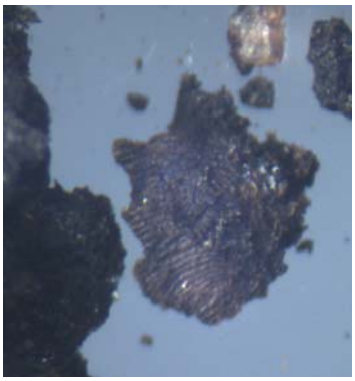
**Description:**

**Exterior view.**

**Interior view of the decorated rim sherd. The rim is incised along the edge in a saw-tooth pattern.**

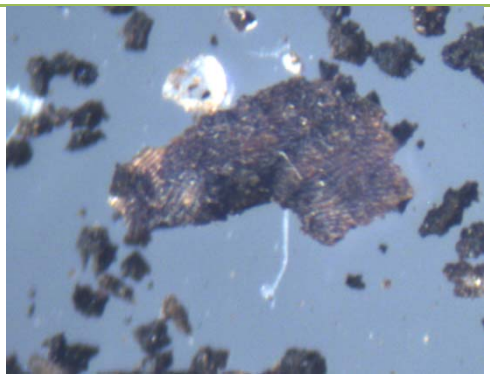
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



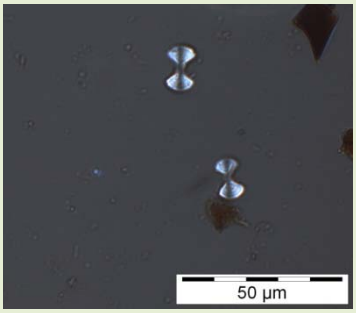
**Description:**

**The fragment of fish scale to the left displays concentric rings akin to a 'fingerprint' pattern on the surface, indicating a likely origin in the Salmonid family. Magnification x40.**

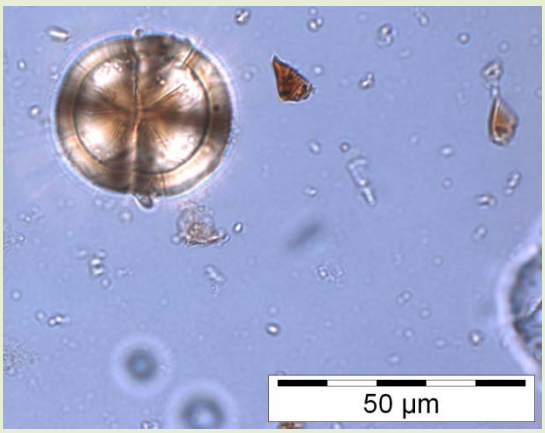


**A second fragment of fish scale displays the same surface patterning as above. Magnification x40.**

## Starches




Bean-shaped granules.




A large round starch grain that has been swollen and is quite degraded. There is visible cracking occurring along the concentric lamellae.

## Phytoliths

**Insignificant quantities**

# Neustadt TRB N_1457

**Ceramic features**


**Interior view. Funnel Beaker.**

**Exterior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Neustadt TRB N_1494

**Ceramic features**


**Description:**

**Interior view. Undecorated rim sherd of a funnel beaker.**

**Exterior view.**

## *INTERIOR DEPOSIT_F*

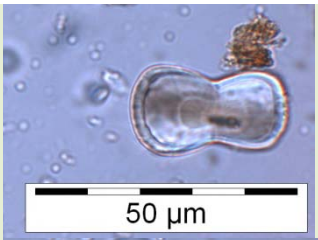
**Low powered microscopy**

**No features visible**

**Description:**

**Starches**

Illustrated to the left are multiple sizes of oval starch.




Bean-shaped starch.


Bean-shaped starch.

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_1495

**Ceramic features**


**Description:**

**Interior view. The neck and body of a Funnel Beaker.**

**Exterior view.**

## *INTERIOR DEPOSIT_F*

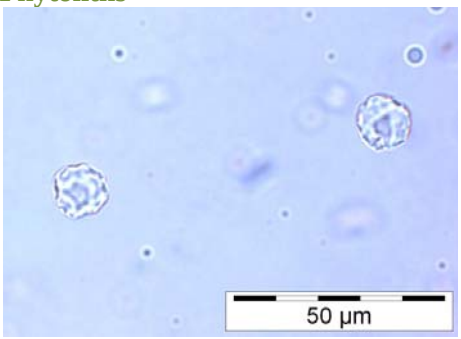
**Low powered microscopy**

**No recorded features.**

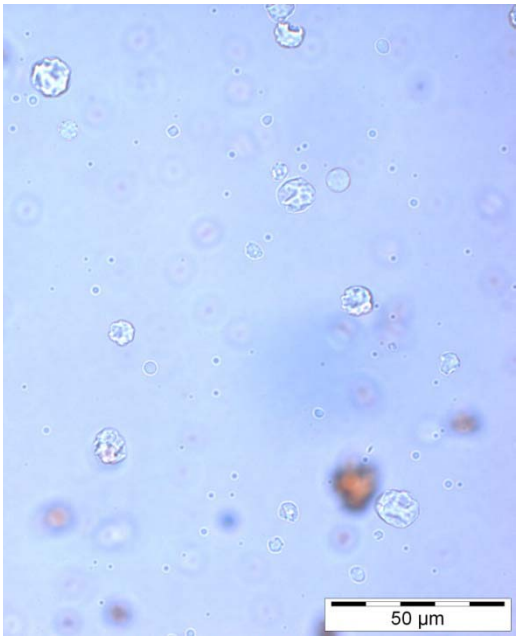
**Starches**

**Insignificant quantities**

**Phytoliths**




Examples of 'globular sinuate' phytoliths consistent with garlic mustard (*Alliaria petiolata*).




Examples of ‘globular sinuate’ phytoliths consistent with garlic mustard (*Alliaria petiolata*).

# Neustadt TRB N_1903

**Ceramic features**

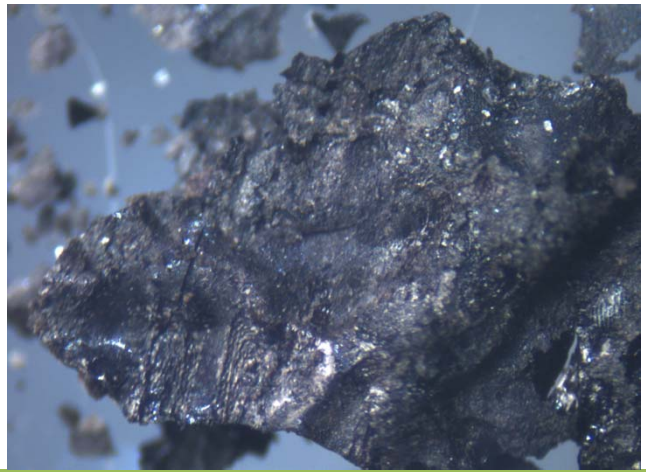

**Description:**

**Interior view. Body sherd of a lugged beaker, with lug.**

**Exterior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



**Description:**

**The fragment of residue to the left displays the impressions of fish scales in its carbonised matrix. The scales display a concentric pattern consistent with an origin in the Salmonid family. Magnification x40.**

| | |
|---|---|
| **Starches** | |
| | **Insignificant quantities** |
| **Phytoliths** | |
| | **Insignificant quantities** |

# Neustadt TRB N_2162

**Ceramic features**


**Description:**

**Interior view.**


**Exterior view.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_2448

**Ceramic features**

**Description:**

**Exterior view. The flat base of a Funnel Beaker.**

**Interior view.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No features visible**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_2451

**Ceramic features**


**Description:**

**Interior view. Rim of a decorated Funnel Beaker.**


**Exterior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_2452

**Ceramic features**

**Description:**

**Interior view.**


**Exterior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_2631

**Ceramic features**

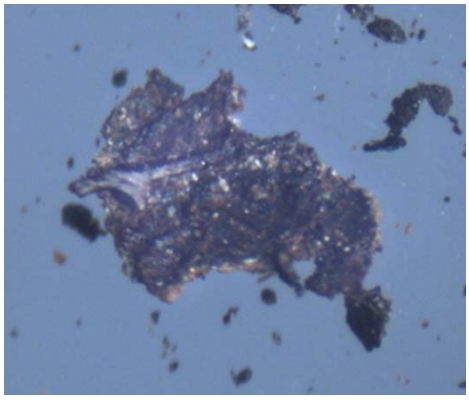
**Description:**

**Interior view. Vessel is part of Pot 50.**

**Exterior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

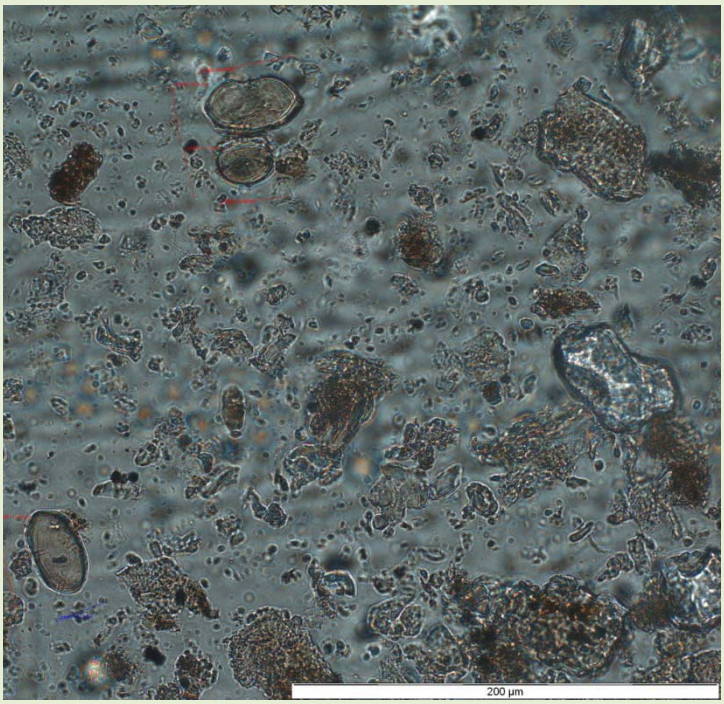


**Description:**

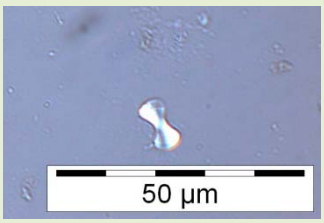
**This image, at magnification x40, shows a piece of possible leaf matter, with stalk extending out to the left.**

## Starches


These oval starches (indicated with an arrow) are still partially embedded in the residue matrix.




More oval starches are exampled here, disaggregated from the carbonised matrix.




A bean-shaped granule.

## Phytoliths

Although this sample has insignificant quantities of silica bodies there are examples of interesting phytolithis.
The image to the left shows a silicified tracheid element. In the modern northern European reference material the only producers of tracheids were *Urtica dioica.* Magnification x600.


This bundle of calcium oxalate raphides are also commonly found in *Urtica dioica.* Magnification x600.

# Neustadt TRB N_2635

**Ceramic features**

**Description:**

**Interior view. Vessel is part of Pot 50.**

**Exterior view.**

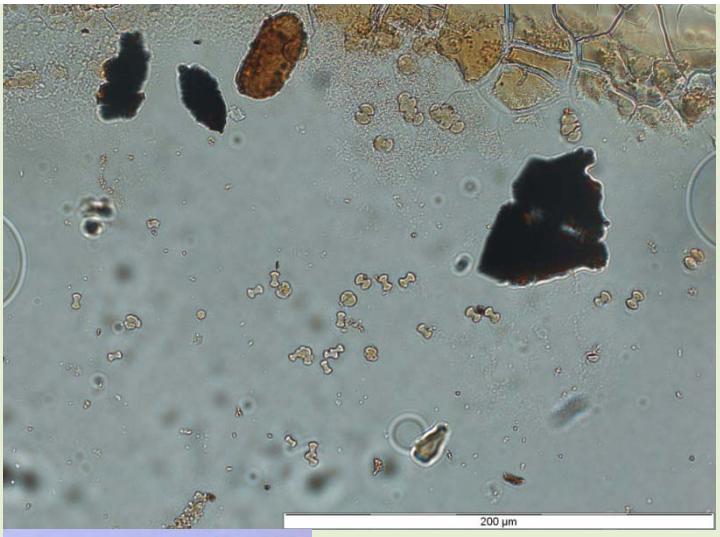
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**Description:**

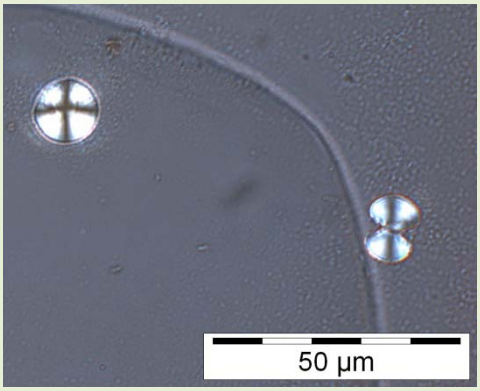
**No recorded features.**

**Starches**




These ‘bow-shaped’ starches are seemingly unique to acorns of the *Quercus* genus, and are small even at this magnification of x600.


A medium sized round granule.




A medium sized round granule with a bean-shaped granule.

**Phytoliths**

**Insignificant quantities**

# Neustadt TRB N_2860

**Ceramic features**

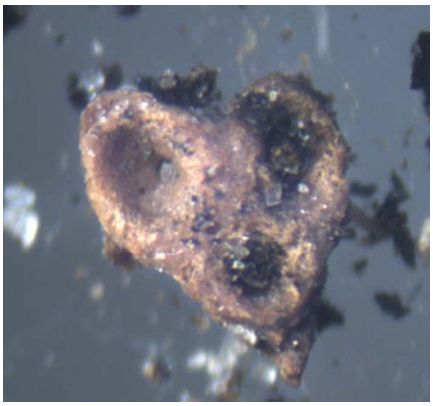
**Description:**

**Interior view.**

**Exterior view.**

## *INTERIOR DEPOSIT_F*

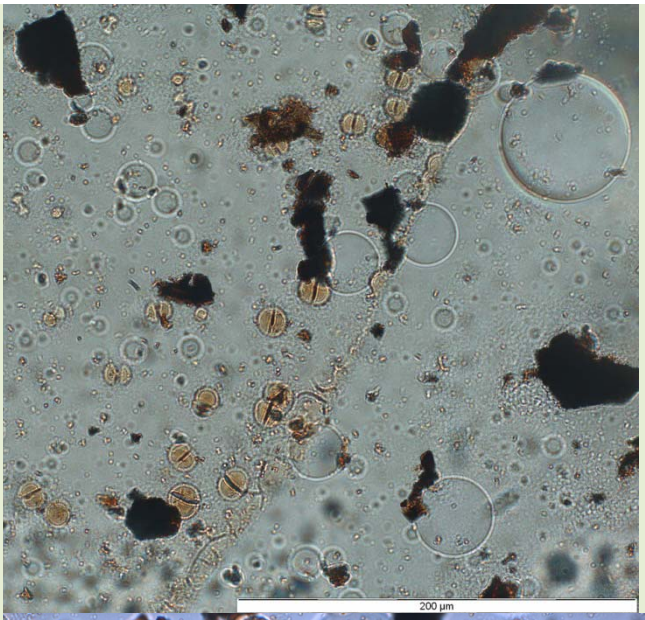
**Low powered microscopy**



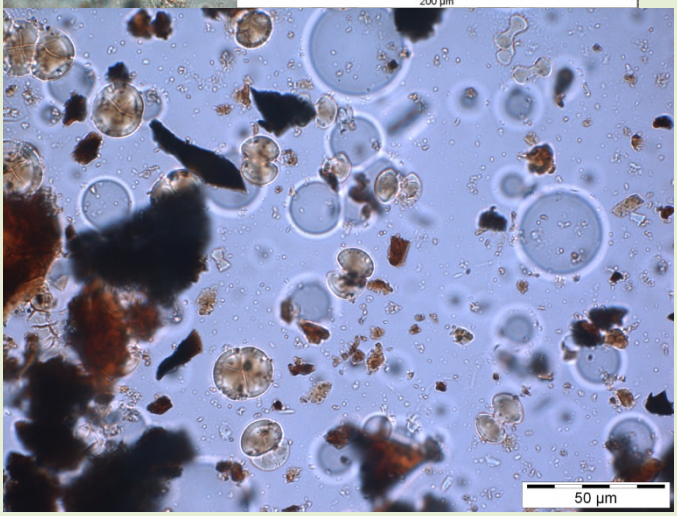
**Description:**

**A fragment of possible mammalian bone. Magnification x40.**

**Starches**




Multiple starch granules of oval, round and bean-shaped varieties. There is some degradation to some of the round examples, and a crack can be seen running across some of the grains.




Multiple starch grains of different shapes; oval, bean-shaped and round.

## Phytoliths

**Indistinctive silica body types.**

# Neustadt TRB N_3233

**Ceramic features**

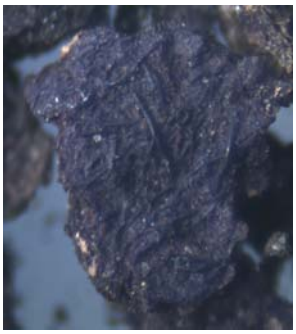

**Description:**

**Exterior view. Sherd is part of Pot 95.**


**Interior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

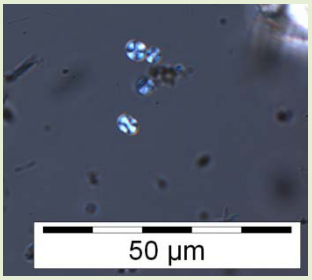


**Description:**

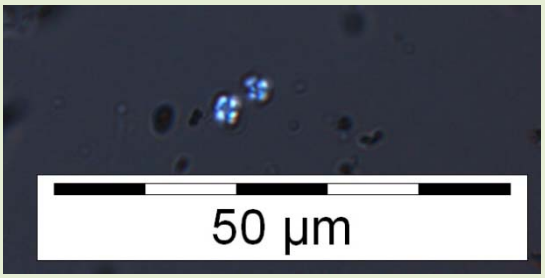
**The fragment of deposit to the left displays fascinating and enigmatic adherences. They may possibly be tiny bones, but the impression under the microscope was of a more fibrous nature. Their origin remains unidentified.**

**Magnification x40.**

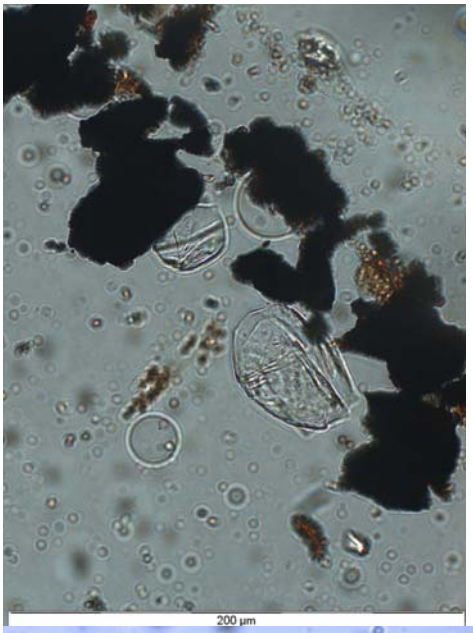
## Starches



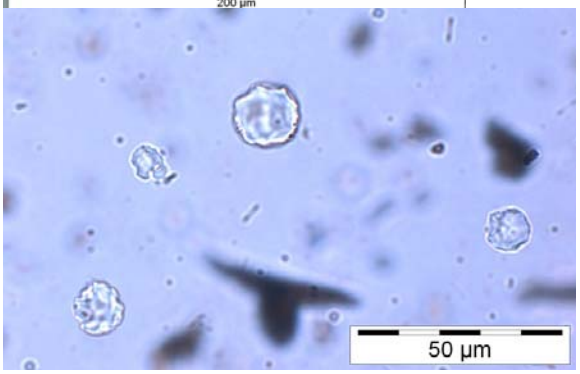

To the left, tiny round starch.




## Phytoliths

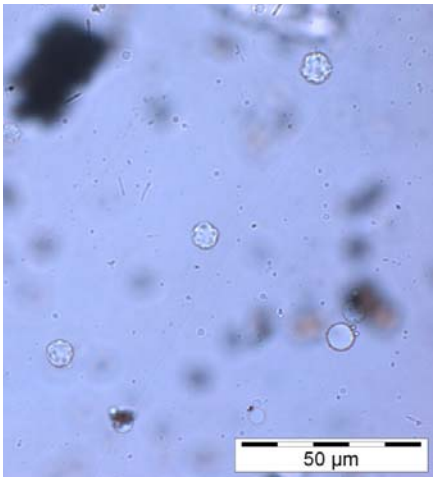



Silicified ovoids with irregular surfaces

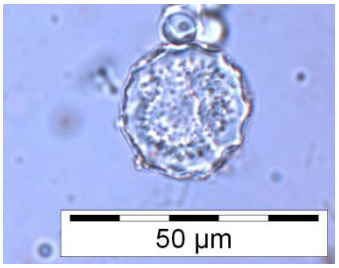



‘Globular sinuate’ phytoliths consistent with garlic mustard (*Alliaria petiolata*).

‘Globular sinuate’ phytoliths consistent with garlic mustard




(*Alliaria petiolata*).




A large pitted phytolith with irregular edge. No known correlates exist in the modern reference collection.

# Neustadt TRB N_3309

**Ceramic features**

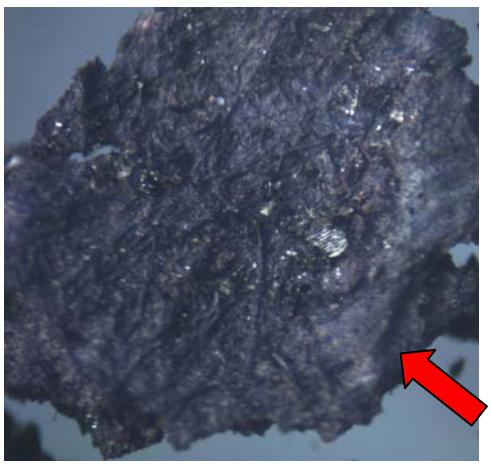

**Description:**

**Exterior view. Sherd is part of Pot 95.**


**Interior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



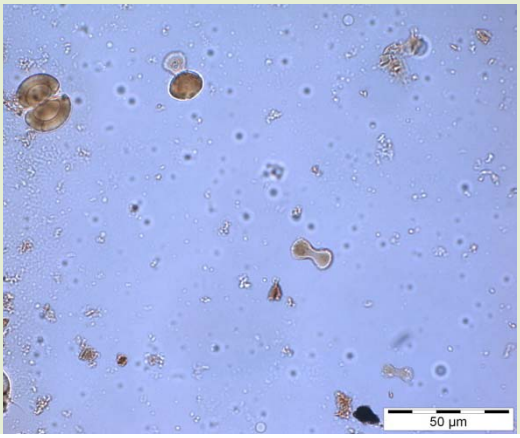
**Description:**

**This fragment of deposit shows unusual surface adherences, in an overlapping fibrous pattern. The origin of this patterning remains unknown. A charred fish scale adheres to the surface, indicated by the arrow. Magnification x40.**

**This fragment of deposit displays similar surface patterning to the above example, but in this case seems to follow the fractal arrangement of leaf vascular tissue. Magnification x40.**

## Starches

To the left, small oval starch grains can be found still encompassed by a preserved cell structure, x600.




Small bean-shaped starch grains.

## Phytoliths

**Insignificant quantities**

# Neustadt TRB N_3377

**Ceramic features**


**Description:**

**Interior view.**

**Exterior view.**

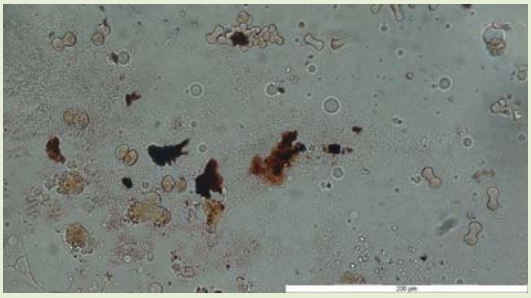
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Description:**

**Starches**



Small 'bow-shaped' starches seemingly unique to acorn of the genus *Quercus*, are illustrated to the right. As the starches alter with cooking they enlarge, accounting for some variety displayed in their sizes.


More examples of bean-shaped granules.

**Phytoliths**

# Neustadt TRB N_3406

**Ceramic features**

**Description:**

**Interior view. Body sherd of a large Funnel Beaker.**

**Exterior view.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No recorded features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

# Åkonge EBK KML 49.5/75.5:4

**Ceramic features**


**Description:**

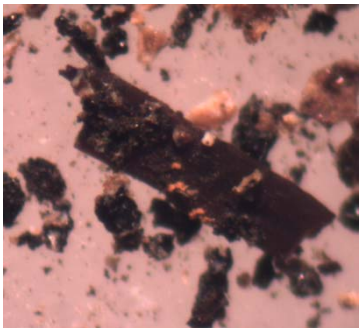
**The exterior surface of this 1.2cm thick body sherd is clean of visible residue.**

**A close up of the interior foodcrust shows the beige-light brown deposit which covers the inside surface.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**A piece f folded fish scale, x40.**

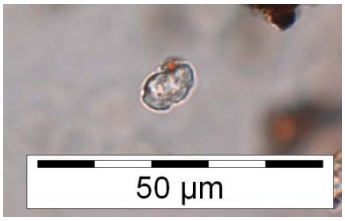


**A piece of bone from an unknown animal, x30.**

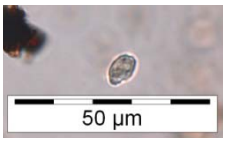
**Starches**

**Insignificant quantities.**

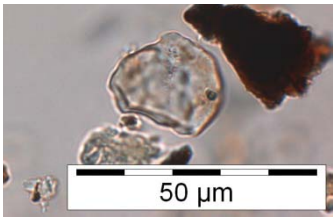
**Phytoliths**



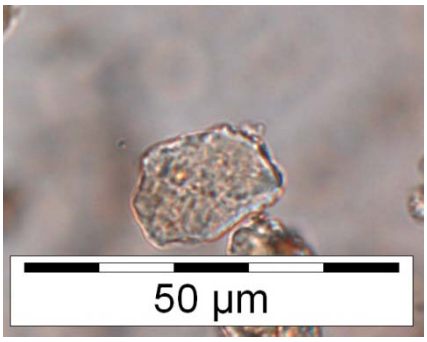

‘Oblong irregular psilate’ phytolith with no known correlates in the modern reference material.




‘Oblong irregular psilate’ phytolith with no known correlates in the modern reference material.




‘Oblong irregular sinuate’ phytolith with no modern referent .




Short-cell phytolith.

# Åkonge EBK KML 49.5/77.0:113

**Ceramic features**

**Description:**

**The exterior view of a 1cm thick body sherd.**

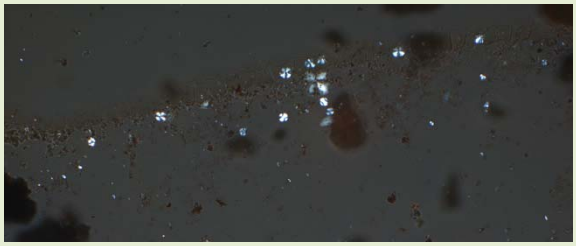
**The interior view of the sherd showing medium- thick carbonised foodcrust at the top of the sherd.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

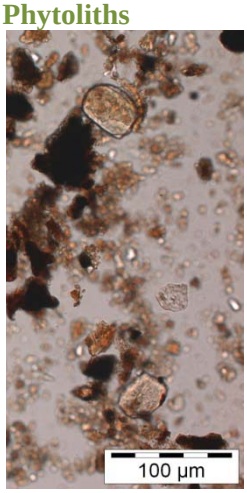
**Starches**



A range of different sizes of round grains, x600.

A bean-shaped granule, x600.

## Phytoliths




Two examples of short-cell phytoliths.

# Åkonge EBK KML 49.5/78.0:49

**Ceramic features**


**Description:**

**The exterior view of this sherd which is 1.3cm thick. The surface is clean of soot.**

**The extensive interior residue was visible in two layers, a beige-white deposit on the outside and a darker brown deposit adhering to the surface. These were sampled separately.**

## *INTERIOR DEPOSIT_F (OLDEST)*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities**

**Phytoliths**

**Insignificant quantities**

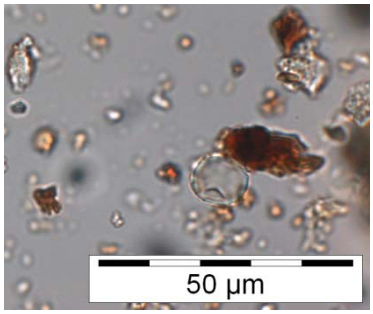
## *INTERIOR DEPOSIT_F (NEWEST)*

**Low powered microscopy**

**Starches**

**Insignificant quantities.**

**Phytoliths**




A 'globular sinuate' phytolith, consistent with garlic mustard (*Alliaria petiolata*).

# Åkonge EBK KML 50.0/75.5:84

**Ceramic features**


**Description:**

**The exterior of this 1.1cm thick body sherd is clean of sooty residue.**

**The interior has a thin coating of dark brown foodcrust, with fish scale adherences.**

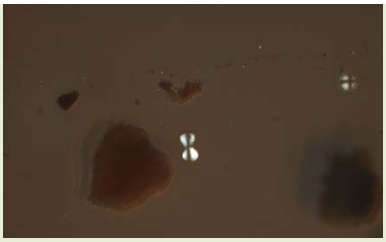
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

An example of a bean-shaped starch, and a round starch.



**Phytoliths**

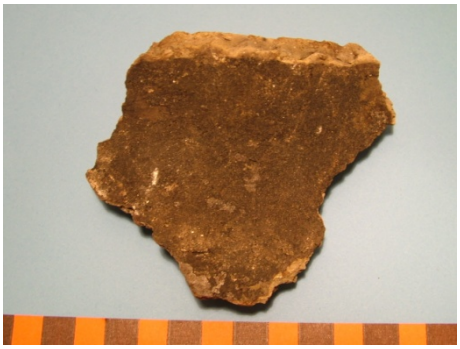
**Insignificant quantities.**

# Åkonge EBK KML 50.0/78.5:2

**Ceramic features**


**Description:**

**The interior view of this shoulder and body sherd which is 1.3cm thick shows an absence of foodcrust.**



**The exterior of the sherd shows extensive coverage of a thick, black, carbonised deposit.**

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Åkonge TRB KML 49.5/74.0:127

**Ceramic features**


**Description:**

**An exterior view of the undecorated rim which is 0.8cm thick.**

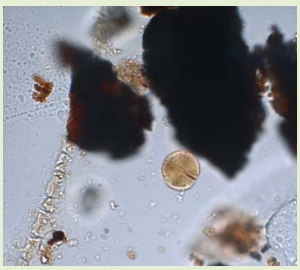
**An interior view of the rim showing the thick foodcrust.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**Fisch scale fragment, possibly from a member of the Salmonid family, x40.**

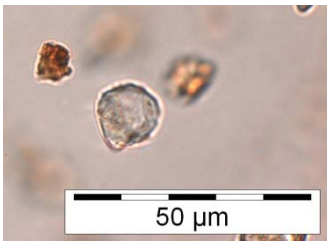
**Starches**



A large round starch granule, x600.

A selection of small round and bean-shaped granules.

## Phytoliths




An example of a ‘globular sinuate’ phytolith consistent with garlic mustard (*Alliaria petiolata*).

# Åkonge TRB KML 49.5/76.5:9

**Ceramic features**

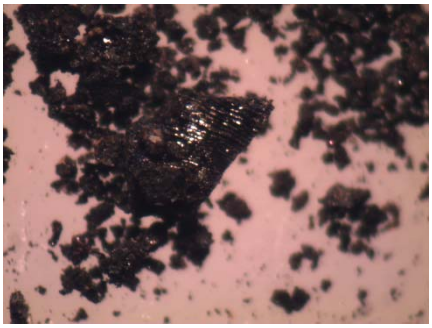

**Description:**

**An exterior view of the 0.9cm thick undecorated rim sherd.**

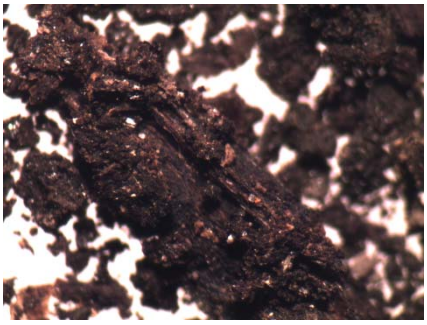
**Interior view of the rim sherd showing foodcrust.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



**A carbonised fish scale with concentric circuli consistent with a member of the Salmonid family, x30.**



**An unknown fibrous structure, possibly a piece of plant, x20.**

**Starches**

Two examples of bean-shaped starches, x600.

**Phytoliths**

**Insignificant quantities.**

# Åkonge TRB KML 49.5/77.5:80

**Ceramic features**

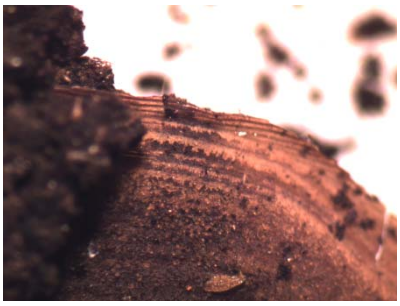

**Description:**

**An exterior view of the 1cm thick body sherd showing a surface clean of soot.**

**A close up of the interior foodcrust showing a thick deposit with some embedded fish scales.**

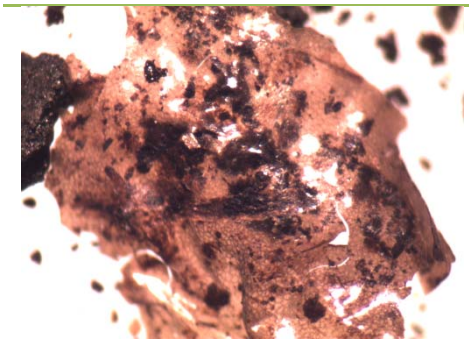
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



**A fish scale embedded in the carbonised matrix. The concentric circuli are consistent with a member of the Salmonid family, x10.**

**An unknown structure, possibly part of a fish bone, x20.**

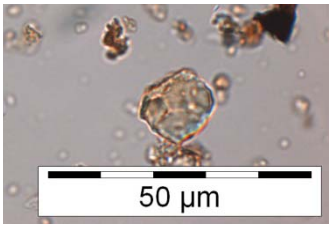


**A possible fish scale. The surface patterning appears as interconnected scaling, which may be consistent with eel scales.**

## Starches

An example of a bean-shaped granule, x600.

## Phytoliths




Example of a dicotyledonous short-cell, x600.

# Åkonge TRB KML 50.0/74.0:9

**Ceramic features**

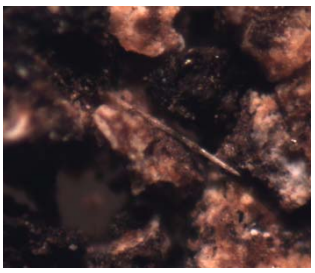
**Description:**

**A view of the exterior showing an absence of sooting. This body sherd is 1.1cm thick.**

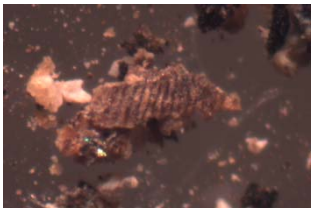
**A close up of the interior showing a beige-light brown residue.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



**A probable fish bone, possibly a rib, x30.**

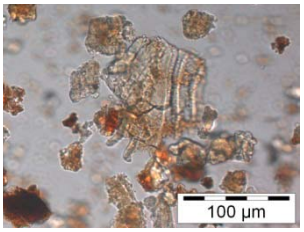


**A possible fish scale, x25.**

**Starches**

**Insignificant quantities.**

**Phytoliths**



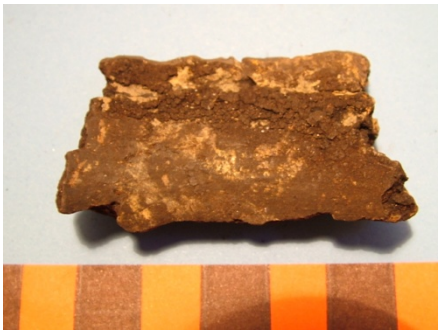

Silica skeleton or tracheid phytolith.

# Åkonge TRB KML 50.0/74.0:12

**Ceramic features**


**Description:**

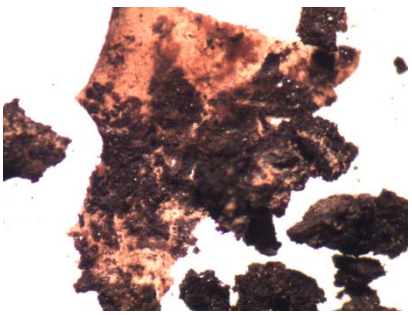
**An exterior view of a decorated rim, 1cm thick. Decoration is made up of incisions on the rim edge.**



**An interior view of the rim sherd showing a brown-black carbonised deposit.**

## *INTERIOR DEPOSIT_F*

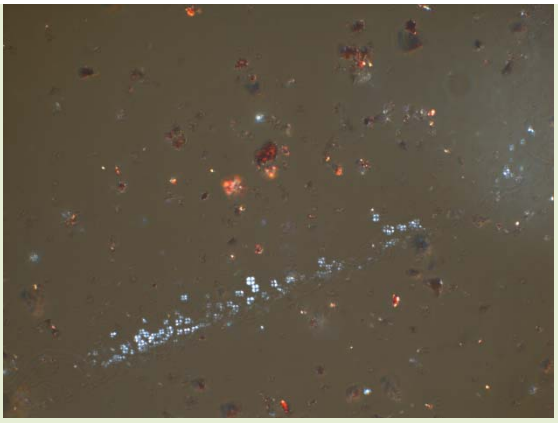
**Low powered microscopy**



**An unknown feature, possible a fish part like a scale, x20.**

**Starches**

Examples of round granules, x600.



**Phytoliths**

**No distinctive types.**

# Åkonge TRB KML 50.0/76.0:8

**Ceramic features**

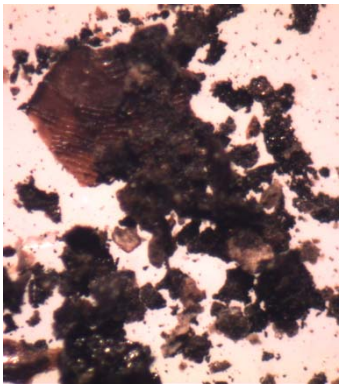
**Description:**

**Exterior view of the decorated rim and body sherd. Decoration includes incicions on the outer rim surface, made with a stick or bone.**

**Interior view of the sherd showing very little foodcrust.**

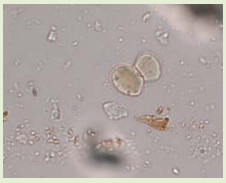
*INTERIOR DEPOSIT_F*

**Low powered microscopy**



**A fish scale with concentric circuli, probably from a member of the Salmonid family, x40.**

**Starches**



A bean-shaped granule, x600.

**Phytoliths**

**No distinctive types.**

# Åkonge TRB KML 50.0/76.0:98

**Ceramic features**

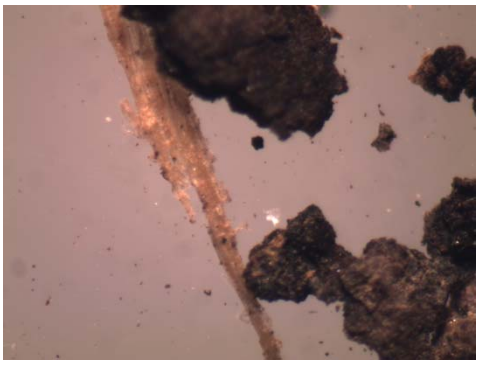

**Description:**

**An exterior view of the 0.9cm thick body sherd, showing a clean surface.**

**An interior close up of the foodcrust showing beige-white residue without apparent carbonisation.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



**An unknown structure, possibly a piece of preserved cellulose, x20.**

**Starches**

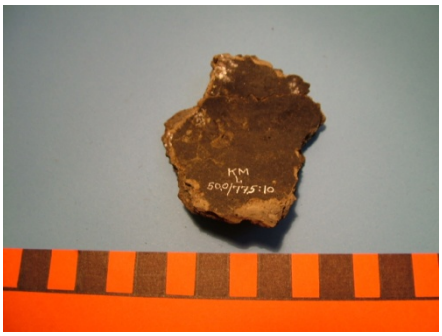
**No significant quantities.**

**Phytoliths**

**No distinctive types.**

# Åkonge TRB KML 50.0/77.5:10

**Ceramic features**



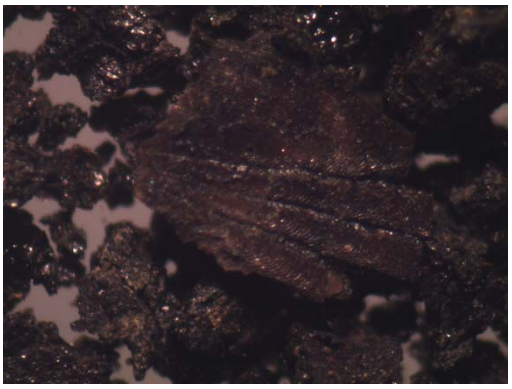

**Description:**

**The exterior view of undecorated rim sherd, 1cm thick.**

**An interior close up of the medium thickness carbonised foodcrust.**

## *INTERIOR DEPOSIT_F*

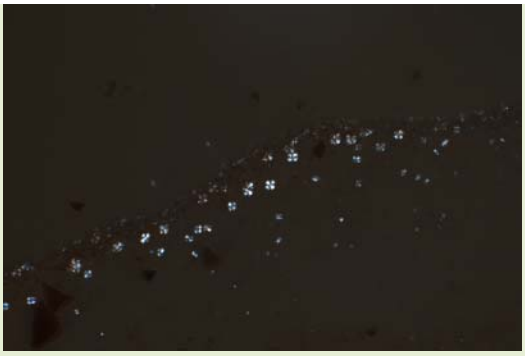
**Low powered microscopy**



**A carbonised fish scale part, x40.**

**Starches**

Examples of small round starches, x600.



A bean-shaped granule, x600.

**Phytoliths**

**Insignificant quantities.**

# Åkonge TRB KML 50.0/78.5:11

**Ceramic features**

**Description:**

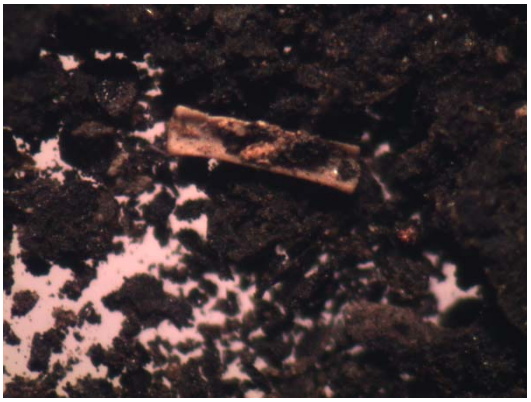
**An exterior view of the shoulder and neck sherd, 1.2cm thick. The exterior of the sherd has an extensive covering of thick carbonised deposit.**

**The interior of the vessel appears clean of foodcrust.**

**The residue was taken from around a hole in the pot. This hole is either the result of repair, or is a stylistic accessory for attaching a carrying cord. Wear marks from a cord are directed away from the broken edge which would seem to point away from a repair feature.**

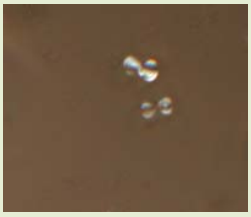
## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**



**A fragment of bone, x20.**

**Starches**



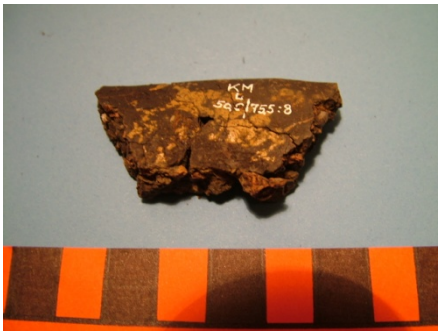
Bean-shaped starches, x600.

**Phytoliths**

**Insignificant quantities.**

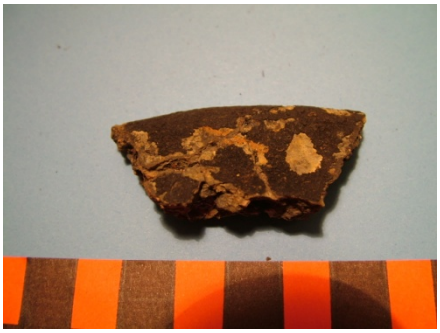
# Åkonge TRB KML 50.0/75.5:8

**Ceramic features**




**Description:**

**The interior of the 1cm thick undecorated rim, showing a lack of carbonised deposit.**



**The exterior of the rim sherd showing medium thick sooty deposits extensively across the surface.**

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

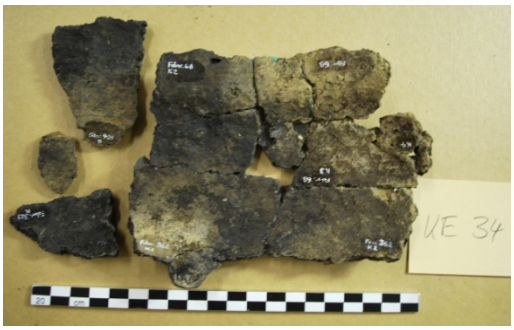
**Insignificant quantities.**

# Wangels TRB KE_34

**Ceramic features**


**Description:**

**The exterior of this large funnel beaker shows very little sooting.**




**The interior of the vessel shows only a small amount of foodcrust.**

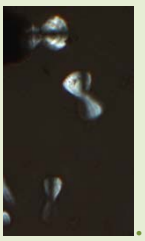
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities but provisionally accepted**



Examples of bean-shaped granules, x600.

**Phytoliths**

**Insignificant quantities.**

# Wangels TRB KE_130

**Ceramic features**



**Description:**

**The exterior of this small lugged flask is clean of soot.**

**In interior of the vessel is darkly discoloured, and there are small amounts of thin brown foodcrust adhering to the surface.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Wangels TRB KE_331

**Ceramic features**



**Description:**

**The exterior of this funnel beaker is discoloured and has sooty adherences. The sherd is a neck and body.**

**The interior appears clean of foodcrust.**

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

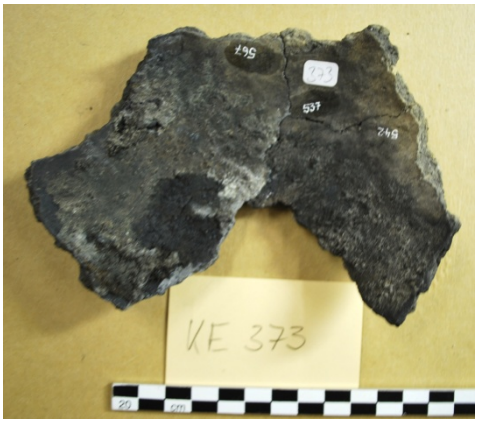
**Insignificant quantities.**

# Wangels TRB KE_373

**Ceramic features**


**Description:**

**The exterior of this funnel beaker body sherd appears clean of sooting.**




**The interior of the sherd is extensively covered by thin-medium thickness carbonised deposit.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Wangels TRB KE_394

**Ceramic features**



**Description:**

**The exterior of this very large funnel beaker is sooted. The sherd is a decorated rim, with stab-and-drag incisions on the exterior rim surface, made using a stick or bone.**

**The interior of the funnel beaker is discoloured but does not contain any foodcrust, and superficially appear not to have been used.**

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Wangels TRB KE_485

**Ceramic features**


**Description:**

**The exterior of this large funnel bowl has no evidence of sooting.**


**The interior shows some darkened discolouration, and minor amounts of thin black-brown foodcrust.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# BOG POT TRB NMA_40211
## Målevgårds Mose

**Ceramic features**

**Description:**

**The exterior of this funnel bowl is clean of soot. These images show the sherd after sampling with the drill.**

**The interior of the sherd shows some minor foodcrust. AMS dates for this foodcrust give 3000 +/- 230 bc (uncal) and 3030 +/- 75 bc (uncal).**

### *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# BOG POT TRB NMA_40883
# Jordløse Mose XX

**Ceramic features**

**Description:**

**This is the exterior of a Type III unornamented funnel beaker. The exterior surface shoes little evidence of sooting.**

**The interior of this vessel is extensively covered with a dark brown surface deposit, which reaches to around the base of the neck. This foodcrust has been AMS dated to 2940 +/- 70bc (uncal). A number of seed impressions are possibly cereal grain (Koch 1998).**

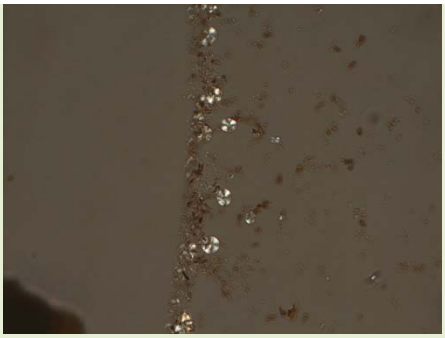
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities but provisionally analysed.**



Various sizes of round starches, x600.

**Phytoliths**

**Insignificant quantities.**

# BOG POT TRB NMA_40884 Jordløse Mose XX

**Ceramic features**

**Description:**

**This Type III vessel is ornamented with three horizontal lines around the rim exterior. There is a small amount of brown foodcrust on this interior surface. A number of seed impressions are in the fabric, one is vetch (*Vicia* sp.).**

**The exterior of the vessel is sooty extensively over its surface.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# BOG POT TRB NMA_40885
## Jordløse Mose XX

**Ceramic features**

**Description:**

**The exterior view of this Type III vessel. There is darkened discolouration as if from cooking, but only minor sooting.**

**The interior of this vessel has a thin brown foodcrust, shown in this close up.**

*INTERIOR DEPOSIT_F*

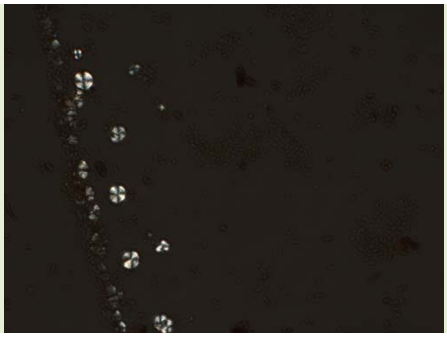
**Low powered microscopy**

**No visible features.**

**Starches**

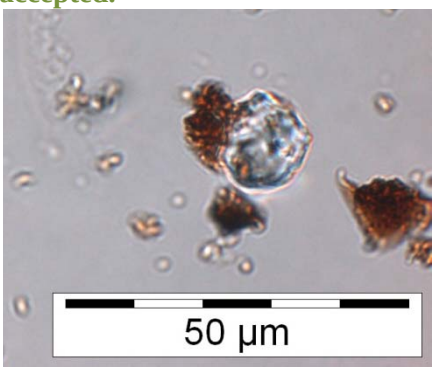
**Insignificant quantities but provisionally accepted.**

Various round and oval shaped starches, x600.



**Phytoliths**

**Insignificant quantities but provisionally accepted.**




Possible ‘globular sinuate’ phytolith consistent with garlic mustard (*Alliaria petiolata*).

# BOG POT TRB NMA_49818
# Maglelyng 2

**Ceramic features**

**Description:**

**A decorated Type II funnel beaker. The decoration includes two rows of incised marks below the rim. There is a thin coating of soot in places on the exterior.**

**There is a thin, dark brown foodcrust on the interior. The fabric has some seed impressions, one of which is a possible cereal grain.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# BOG POT TRB NMA_49819
# Maglelyng 2

**Ceramic features**


**Description:**

**This lugged jar has four lugs on the exterior, which appears clean of sooting. There is no decoration. A number of seed impressions are in the surface, but none resemble grain (Koch 1998).**

**The interior of the jar has substantial amounts of foodcrust.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# BOG POT TRB NMA_40882
# Jordløse Mose XX

**Ceramic features**

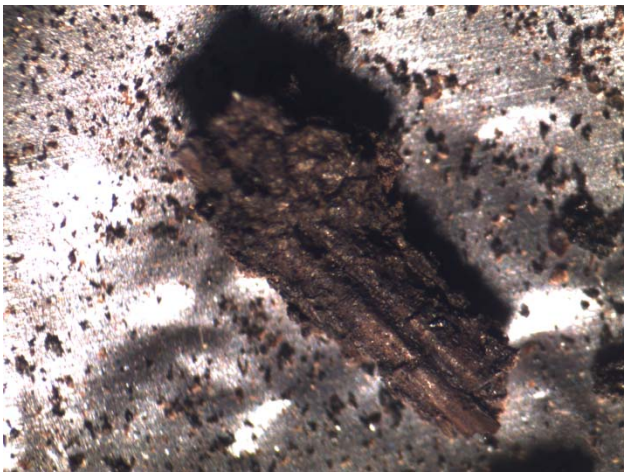

**Description:**

**The interior of this Type II lugged beaker contains substantial amounts of medium thick, brown foodcrust.**

**There is quite a lot of sooting on the exterior of the vessel, especially around the neck-body transition.**

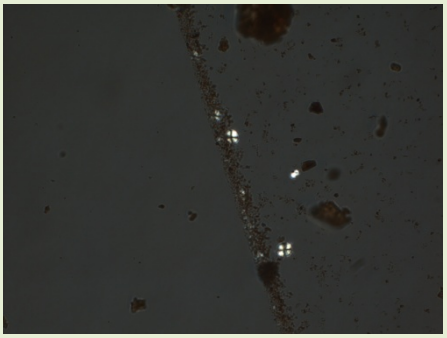
## *INTERIOR DEPOSIT_F*

**Low powered microscopy**



**Possible bone fragment, x20.**

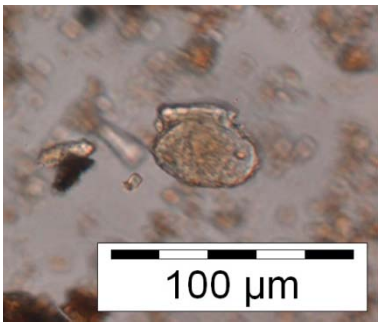
**Starches**



Various sizes of round and oval starches, x600.

**Phytoliths**


A selection of examples of very regular sized phytolith ovoids, c.40µm length.




## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø EBK ST_X004_201

**Ceramic features**

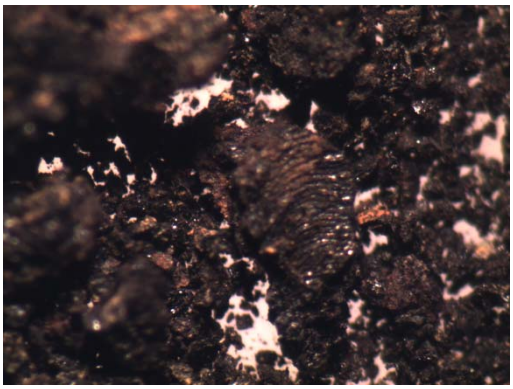
**Description:**

**The interior view of this body sherd, 1.3cm thick. There is extensive coverage of foodcrust.**

**On the exterior there is only minor sooting, but lots of discolouration.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

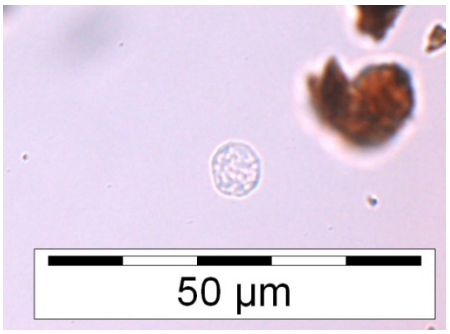


**Carbonised fish scale with concentric circuli consistent with a member of the Salmonid family, x30.**

**Starches**

**Insignificant quantities.**

**Phytoliths**




Possible globular sinuate phytolith consistent with garlic mustard (*Alliaria petiolata*).

# Stenø EBK ST_X004_205

**Ceramic features**

**Description:**

**The interior of this body sherd shows a beige-brown foodcrust extensively covering the surface.**

**The exterior appears clean of soot. The sherd is 1.1cm thick in H-construction.**

## *INTERIOR DEPOSIT_F*

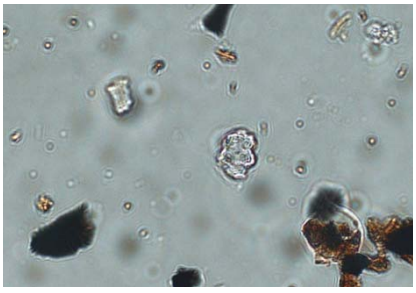
**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**



Short cell phytolith, x200.

# Stenø EBK ST_X026_222

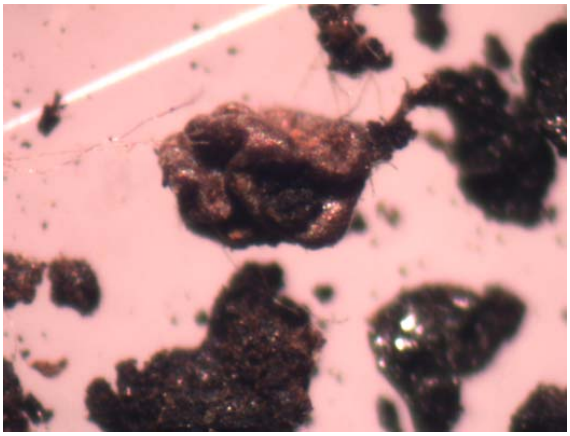
**Ceramic features**

**Description:**

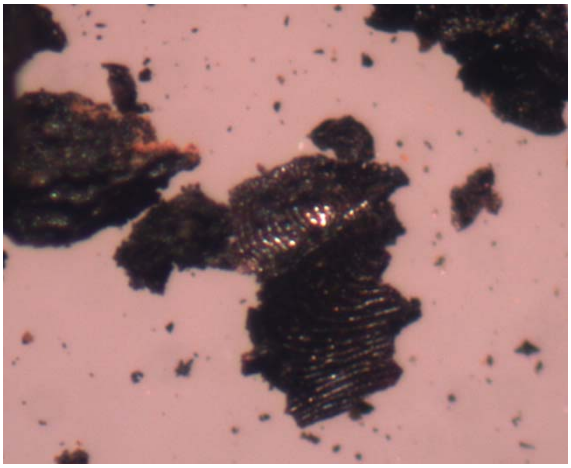
**The exterior of this sherd did not appear to have much sooting. This view of the interior shows extensive foodcrust, just below the neck. The sherd is a neck with no coil change, 0.8cm thick.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

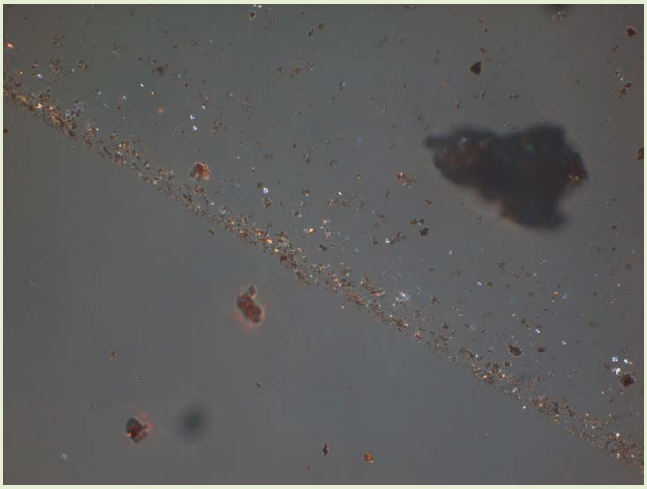


**Possible insect pupae or plant seed, x40.**



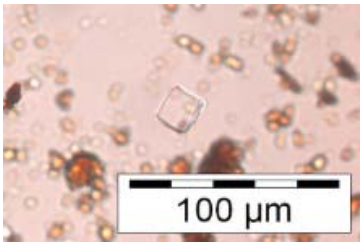
**A fish scale with concentric circuli consistent with a member of the Salmonid family, x40.**

## Starches



Small round starches appear in this picture as illuminated circular bodies, x600.

## Phytoliths




A possible monocotyledon short cell.

# Stenø EBK ST_X028_217

**Ceramic features**

**Description:**

**This sherd is 1.5cm thick with fingernails in the coil. It is a body sherd. There is extensive covering of foodcrust on the interior surface.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø EBK ST_X082_029

**Ceramic features**

**Description:**

**A body sherd 1.4cm thick. This is the interior view, showing an extensive covering in a grey-brown foodcrust.**

## *INTERIOR DEPOSIT_F*

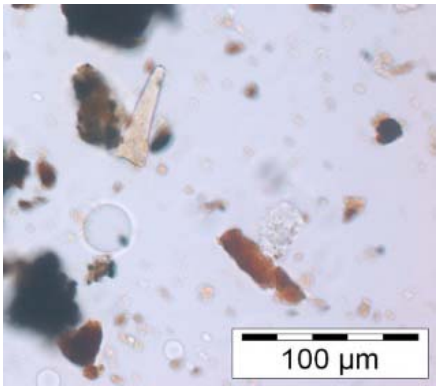
**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**




A possible hair cell phytolith.

# Stenø EBK ST_X087_007

**Ceramic features**

**Description:**

**This is an interior view of a neck sherd, with no coil change. The sherd is 1.2cm thick and has extensive coverage of a thick black-brown foodcrust on the interior surface.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø EBK ST_X095_039

**Ceramic features**

**Description:**

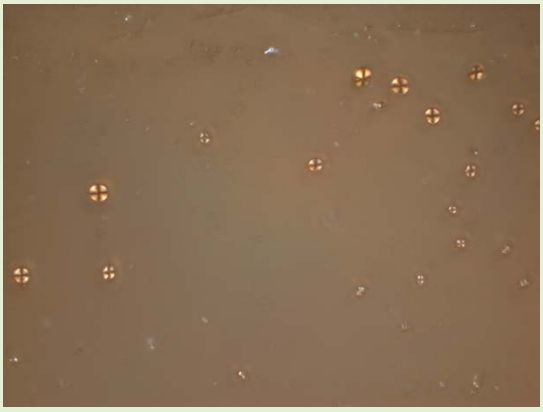
**This is the interior view of the 1.4cm thick neck sherd with no coil change. This interior has extensive coverage of a dark brown, thick foodcrust. The exterior also has sooty deposits.**

## *INTERIOR DEPOSIT_F*

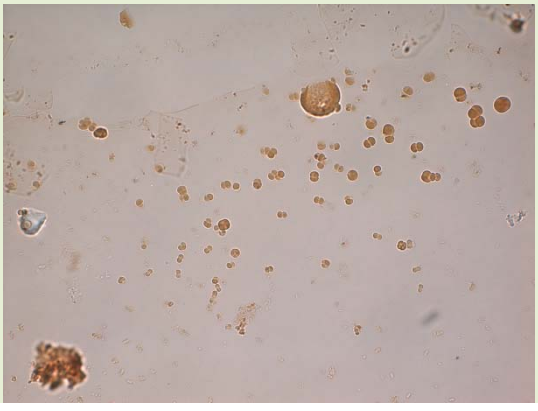
**Low powered microscopy**

**No visible features.**

**Starches**

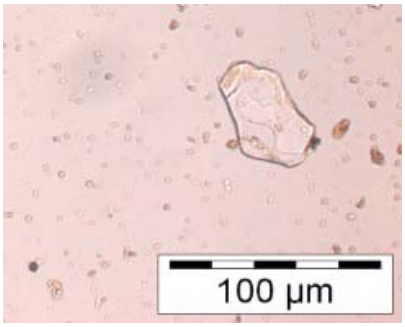


Various sizes of round starches, x600.



Small bean-shaped and round granules, x600.

**Phytoliths**




Short cell of a possible dicot.

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø EBK ST_X116_115

**Ceramic features**


**Description:**

**This sherd is 1.5cm thick body sherd with an extensive covering of foodcrust on the interior. There is a layer of lacquer covering part of the surface, for writing the label on. Sampling avoided this area.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

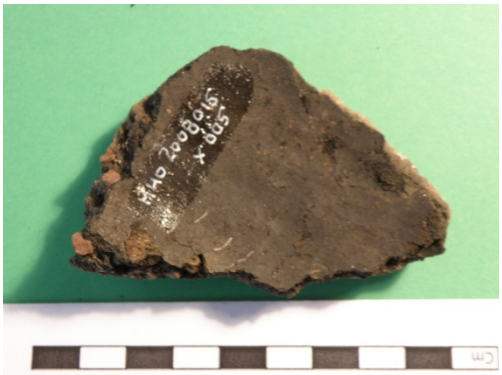
**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø TRB ST_X005_225

**Ceramic features**



**Description:**

**The interior of the rounded base of a Type 0 funnel beaker. There is minor brown foodcrust on this interior, which is 0.9cm thick.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

Large oval grain, x600.

**Phytoliths**

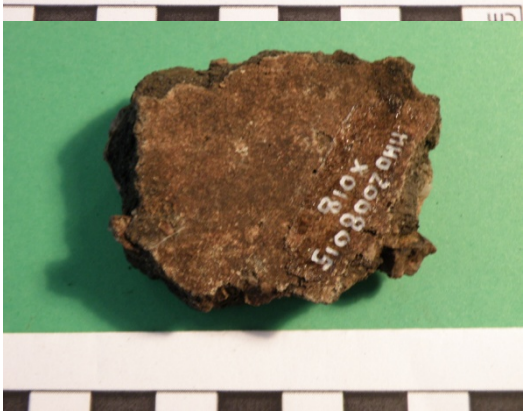
**Insignificant quantities.**

# Stenø TRB ST_X018_213

**Ceramic features**

**Description:**

**The exterior view of a body sherd, 1cm thick. There is no exterior sooting.**



**The interior view of the body sherd, showing some minor brown foodcrust.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**


A silica skeleton.

# Stenø TRB ST_X018_215

**Ceramic features**

**Description:**

**The interior view of this body sherd, which is 1.1cm thick. There is foodcrust adhering to the top and right parts of the sherd in this image.**

**The exterior view of this body sherd shows only minor sooting.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø TRB ST_X019_193

**Ceramic features**

**Description:**

**The interior of this Type 0 rounded base shows a discrete region of thick carbonised foodcrust.**

**This is a close up of the foodcrust region pictured above.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø TRB ST_X036_096

**Ceramic features**

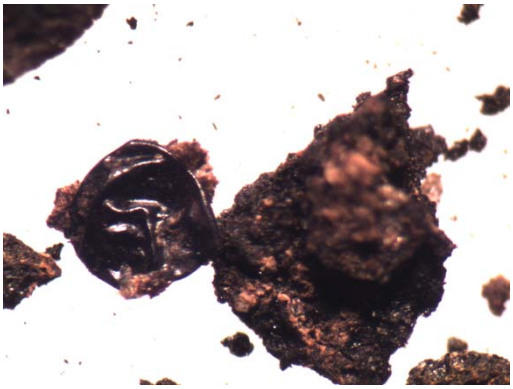
**Description:**

**The interior view of this neck sherd which is 0.7cm thick. The interior has a substantial coating of black-brown foodcrust.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**Probable bone fragment of fish scale, x30.**

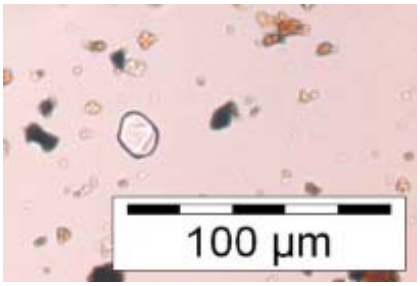


**Possible seed or insect egg, x20.**

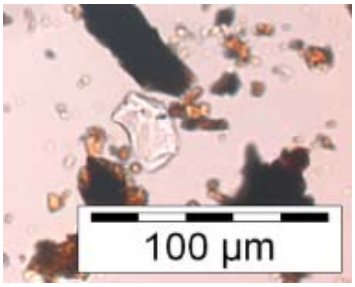
**Starches**

**Insignificant quantities.**

## Phytoliths




Short cell phytolith.




Unknown phytolith, possible short cell.

# Stenø TRB ST_X082_015

**Ceramic features**

**Description:**

**This is a body and neck sherd of a possible funnel bowl. This interior view shows dark brown foodcrust on the left edge of the sherd (which is towards the lower part of the vessel).**

## *INTERIOR DEPOSIT_F*

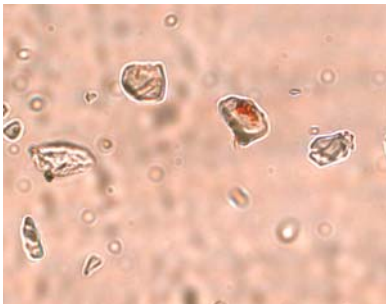
**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**



Short cell phytoliths, x600.

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**Starches**

| | |
|---|---|
| | **Insignificant quantities.** |
| **Phytoliths** | |
| | **Insignificant quantities.** |

# Stenø TRB ST_X095_047

**Ceramic features**

**Description:**

**The interior view of this 0.9cm body sherd shows substantial quantities of brown-beige foodcrust.**

**The exterior view of this sherd shows very small quantities of soot.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

| | |
|---|---|
| **Starches** | **Insignificant quantities.** |
| **Phytoliths** | **Insignificant quantities.** |

# Stenø TRB ST_X003_176

**Ceramic features**

**Description:**

**The exterior view of this sherd shows dark brown-black soot. The sherd includes a small piece of rim, but is mostly body, 1.1cm thick.**

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Stenø TRB ST_X017_177

**Ceramic features**

**Description:**

**The exterior of this 1.1cm thick funnel beaker has thick dark brown-black sooty deposit.**

## *EXTERIOR DEPOSIT_S*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_AAXM

| Ceramic features | Description: |
|---|---|
| No picture available. | |

*INTERIOR DEPOSIT_F*

| Low powered microscopy | |
|---|---|
| | No visible features. |
| **Starches** | |
| | Insignificant quantities. |
| **Phytoliths** | |
| | Insignificant quantities. |

# Tybrind Vig EBK TV_2033_AB

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Indistinctive types.**

# Tybrind Vig EBK TV_2033_AFK

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

Round starch granules, x600.

**Phytoliths**

An elongated silica body, x600.

# Tybrind Vig EBK TV_2033_BGU

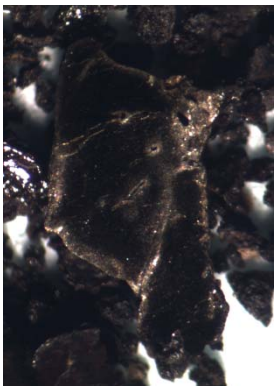
**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

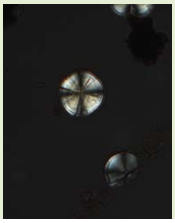
**Possible eel scale, x30.**



**Fish fragment, possible eel scale, x30.**

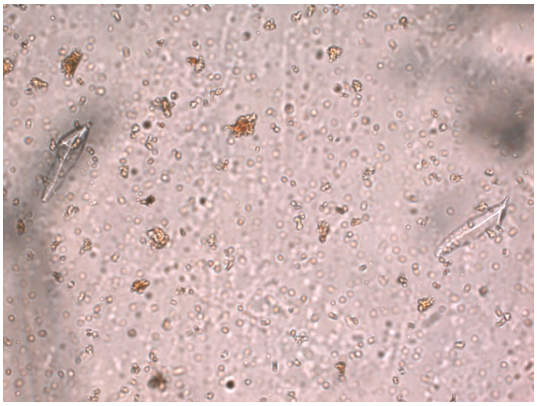
**Starches**

A bean-shaped granule, x600.

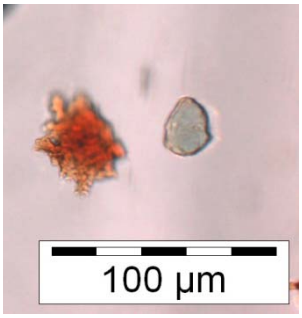


Large round granule, x600.

**Phytoliths**



Two trapezoidal phytoliths, probably from the epidermis, x200.




Possible cuneiform buliform cell from a grass leaf.

# Tybrind Vig EBK TV_2033_BHJ

| Ceramic features | Description: |
|---|---|
| No picture available. | |

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

No visible features.

**Starches**

Insignificant quantities.

**Phytoliths**

Insignificant quantities.

# Tybrind Vig EBK TV_2033_BNK

**Ceramic features** **Description:**

**No picture available.**

## *INTERIOR DEPOSIT_F*

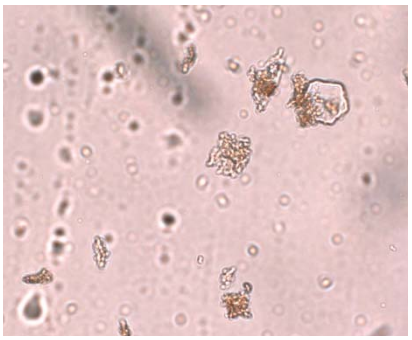
**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**



A short cell phytolith, x200.

# Tybrind Vig EBK TV_2033_BOF

**Ceramic features** **Description:**

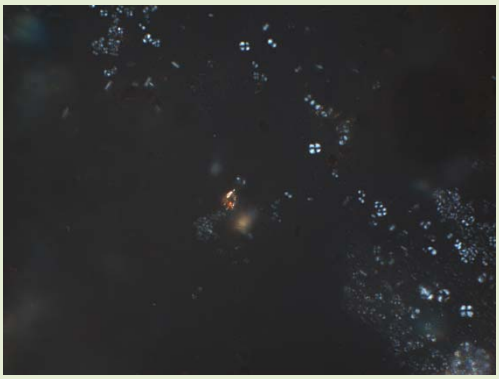
**No picture available.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**Possible fish scale, or plant fragment, x20.**

**Starches**



Round and bean-shaped granules, x600.

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_BQY

**Ceramic features** **Description:**

**No picture available.**

## *INTERIOR DEPOSIT_F*

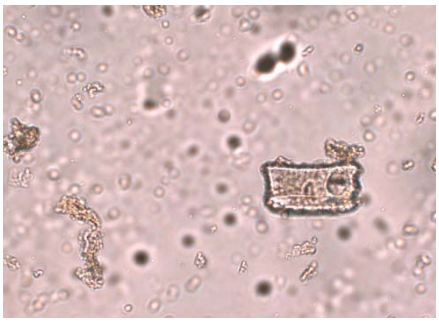
**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**



A short cell phytolith, x200.

# Tybrind Vig EBK TV_2033_DG

| Ceramic features | Description: |
|---|---|
| No picture available. | |

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

No visible features.

**Starches**

Insignificant quantities.

**Phytoliths**

Insignificant quantities.

# Tybrind Vig EBK TV_2033_FSZ

**Ceramic features** **Description:**

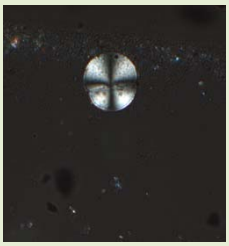
**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**



A large round starch grain, x600.

Round starch grains, x600.

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_LGKM

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

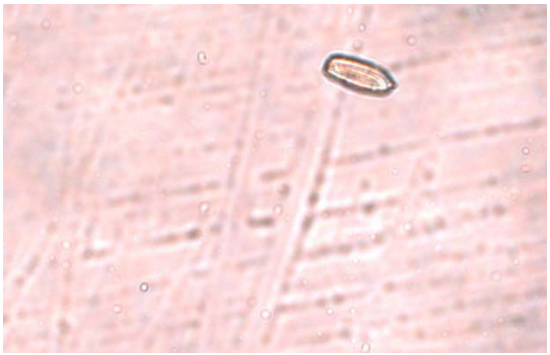
**Low powered microscopy**

**No visible features.**

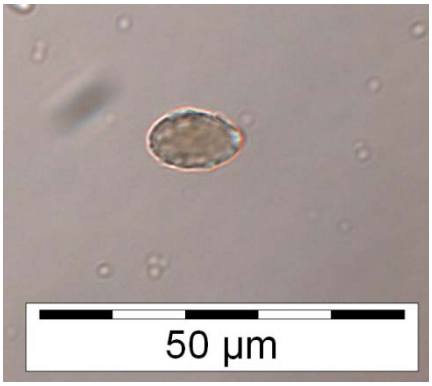
**Starches**

A range of round grains, x600.

**Phytoliths**



A short-cell phytolith, x600.




An ‘oblong irregular psilate’ phytolith.

# Tybrind Vig EBK TV_2033_MAG

**Ceramic features** **Description:**

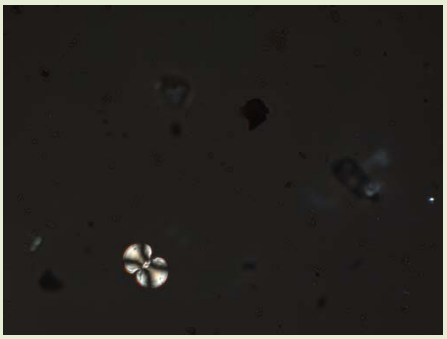
**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**



A bean-shaped granule, x600.

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_MBO

| Ceramic features | Description: |
|---|---|
| No picture available. | |

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

No visible features.

**Starches**

Insignificant quantities.

**Phytoliths**

Insignificant quantities.

# Tybrind Vig EBK TV_2033_MDB

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

Round starch granules, x600.

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_MTC

**Ceramic features** **Description:**

**No pictures available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

Round starch granules of various sizes, x600.

**Phytoliths**


'Oblong irregular sinuate' phytolith of unknown origin plant.


Possible cuneiform bulliform phytoliths from the epidermis of grass leaf.

# Tybrind Vig EBK TV_2033_NRW

| Ceramic features | Description: |
|---|---|
| No picture available. | |

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

No visible features.

**Starches**

Insignificant quantities.

**Phytoliths**

Insignificant quantities.

# Tybrind Vig EBK TV_2033_PHB

| Ceramic features | Description: |
| --- | --- |
| No picture available. | |

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

No visible features.

**Starches**

Insignificant quantities.

**Phytoliths**

Insignificant quantities.

# Tybrind Vig EBK TV_2033_PJR

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_PJT

**Ceramic features** **Description:**

**No picture available.**

## *INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_PUF

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

**Starches**

**Insignificant quantities.**

**Phytoliths**

**Insignificant quantities.**

# Tybrind Vig EBK TV_2033_RAG-A

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

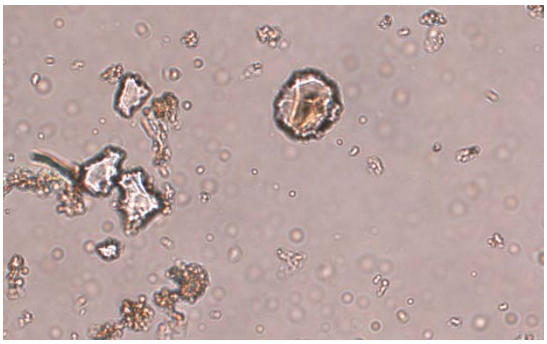
**Low powered microscopy**

**Possible bone fragment with longitudinal structure, x15.**

**Starches**

**Insignificant quantities.**

**Phytoliths**



A short-cell phytolith, x200.

# Tybrind Vig EBK TV_2033_RBD

**Ceramic features** **Description:**

**No picture available.**

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

**No visible features.**

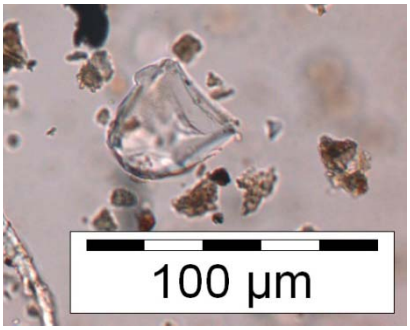
**Starches**

**Insignificant quantities.**

**Phytoliths**


A possible cuneiform bulliform phytolith from grass epidermis.


Termed an ‘oblong irregular sinuate’, this phytolith has no known correlates in modern reference material.




A ‘semi-globular verrucate’ phytolith, with no known correlates in modern reference material.


Possible ‘globular sinuate phytolith’ of the kind consistent with garlic mustard (*Alliaria petiolata*).

# Tybrind Vig EBK TV_2033_RCF

| Ceramic features | Description: |
|---|---|
| No pictures available. | |

*INTERIOR DEPOSIT_F*

**Low powered microscopy**

No visible features.

**Starches**

Insignificant quantities.

**Phytoliths**

Insignificant quantities.