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Martin Street³, Annabell Zander¹*

Late Pleistocene and Early Holocene Transitions in North Rhine - Westphalia

1 University of Cologne, CRC 806, Project D4

2 Johannes-Gutenberg-University Mainz, Palaeogenetics Group and
Molecular Population Genetics, Smurfit Institute of Genetics, Trinity College Dublin, Ireland

3 MONREPOS | archaeological research centre and museum for human behavioural evolution

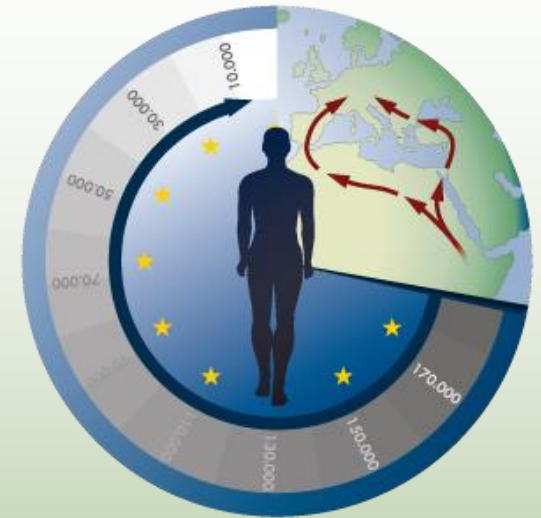


CRC 806 „Our Way to Europe“: Culture-Environment Interaction and Human Mobility in the Late Quaternary



Project D4

Chronology, Site Concentrations and Cultural Differentiation of the Mesolithic in the Rhineland and in Westphalia



CRC 806

„Our Way to Europe“

Universities

Cologne, Bonn, Aachen

Principal Investigator: Prof. Dr. Andreas Zimmermann

Postdoc: Dr. Birgit Gehlen

Research Assistants:

Ingrid Koch M.A., Sarah Pinell B.A., Nele Schneid M.A., Kai Vogl, Annabell Zander B.A.

Major Research Tasks

1. Absolute chronology
2. Dating of surface assemblages
3. Mapping of sites for at least 3 periods
4. Landuse and communication
5. Data for modelling population density

Mesolithisation / Development of the Mesolithic /

Neolithisation



Late Pleistocene and Early Holocene Transitions

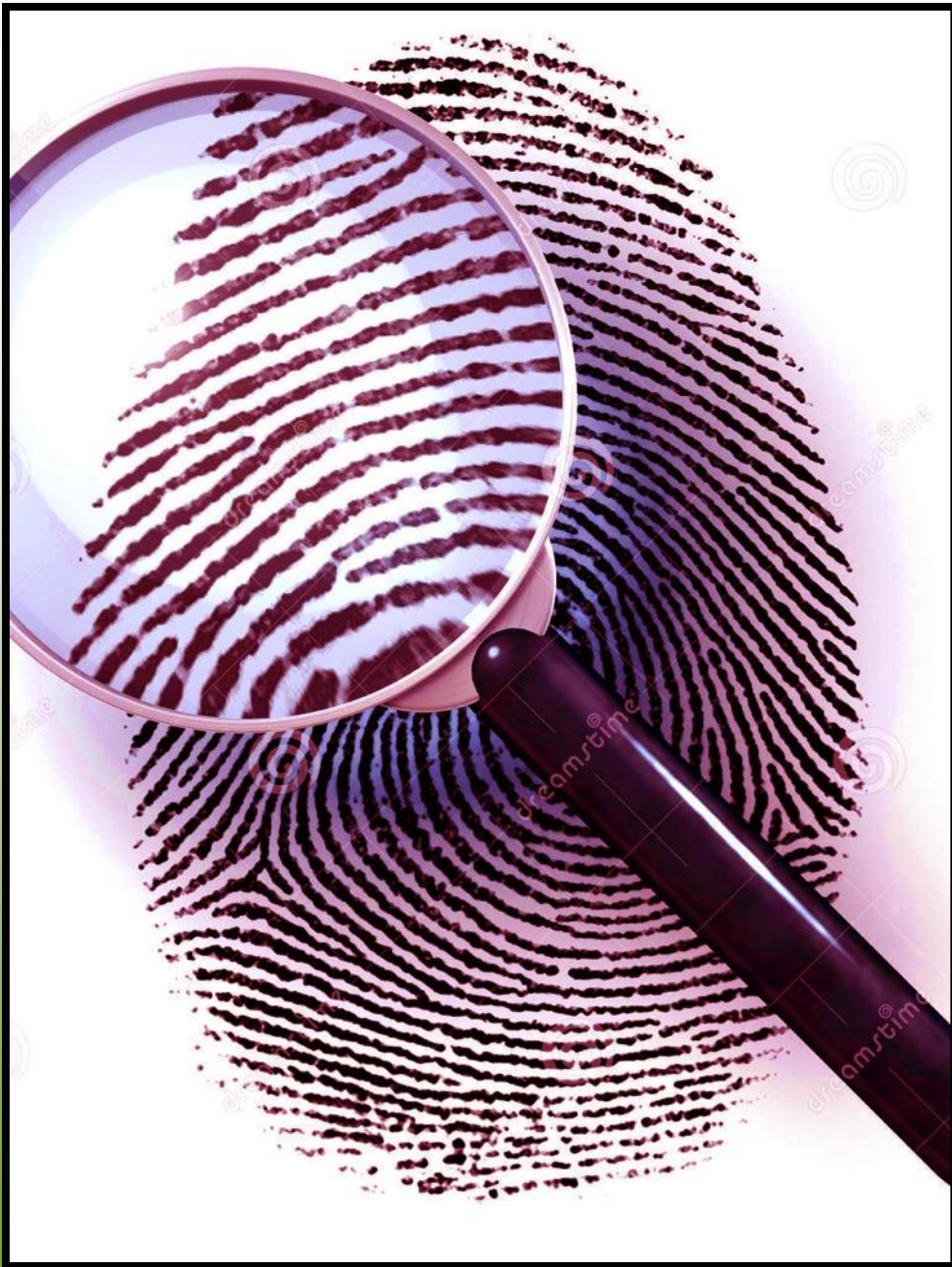
Three Sub-Projects

1. Absolute Dating of the Barbed Points from Dinslaken,
Lower Rhine Area (Birgit Gehlen)

2. Absolute Dating of 10 aurochs
from Bedburg-Königshoven, Lower Rhine Area
(Birgit Gehlen / Martin Street)

2.1 Decoding the genome of the European aurochs
(Amelie Scheu)

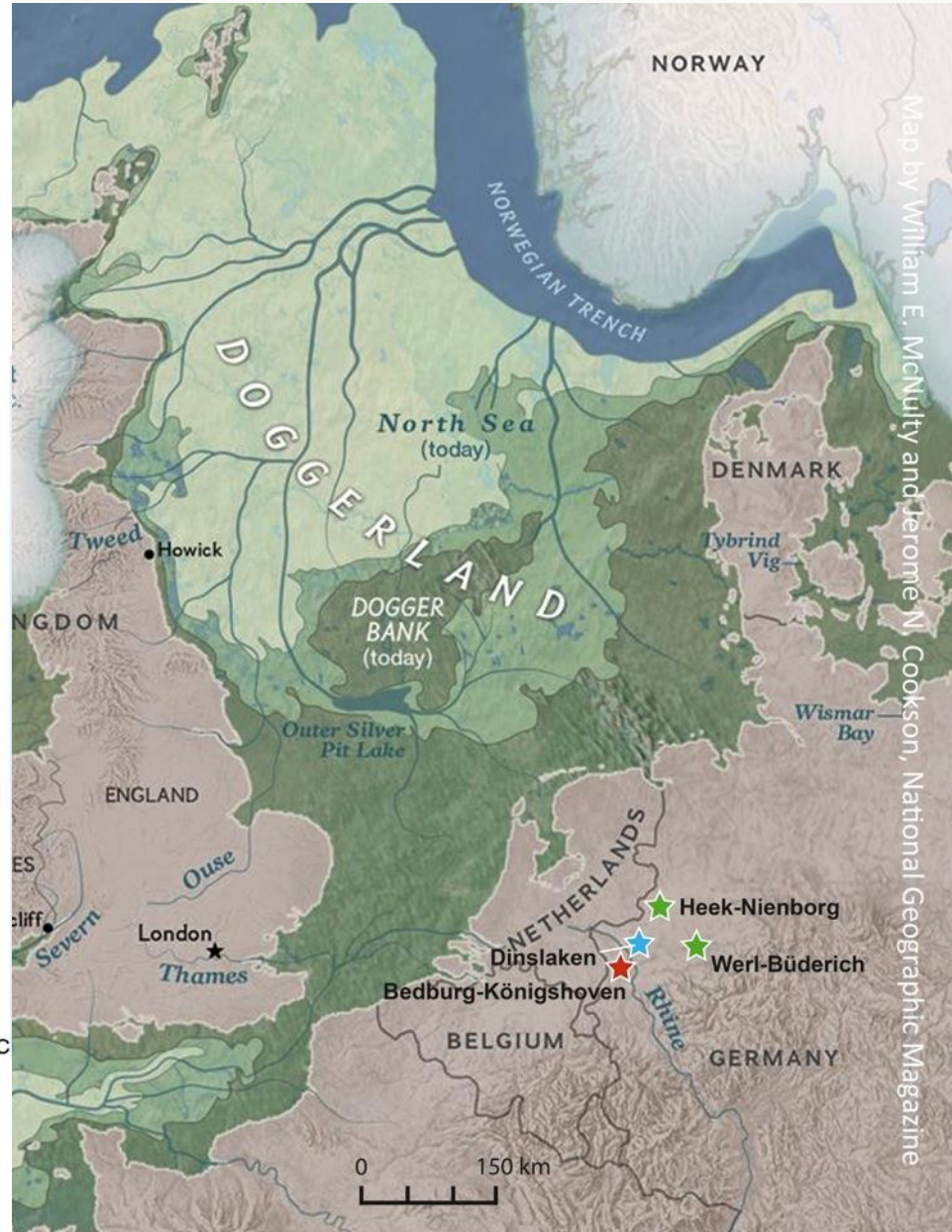
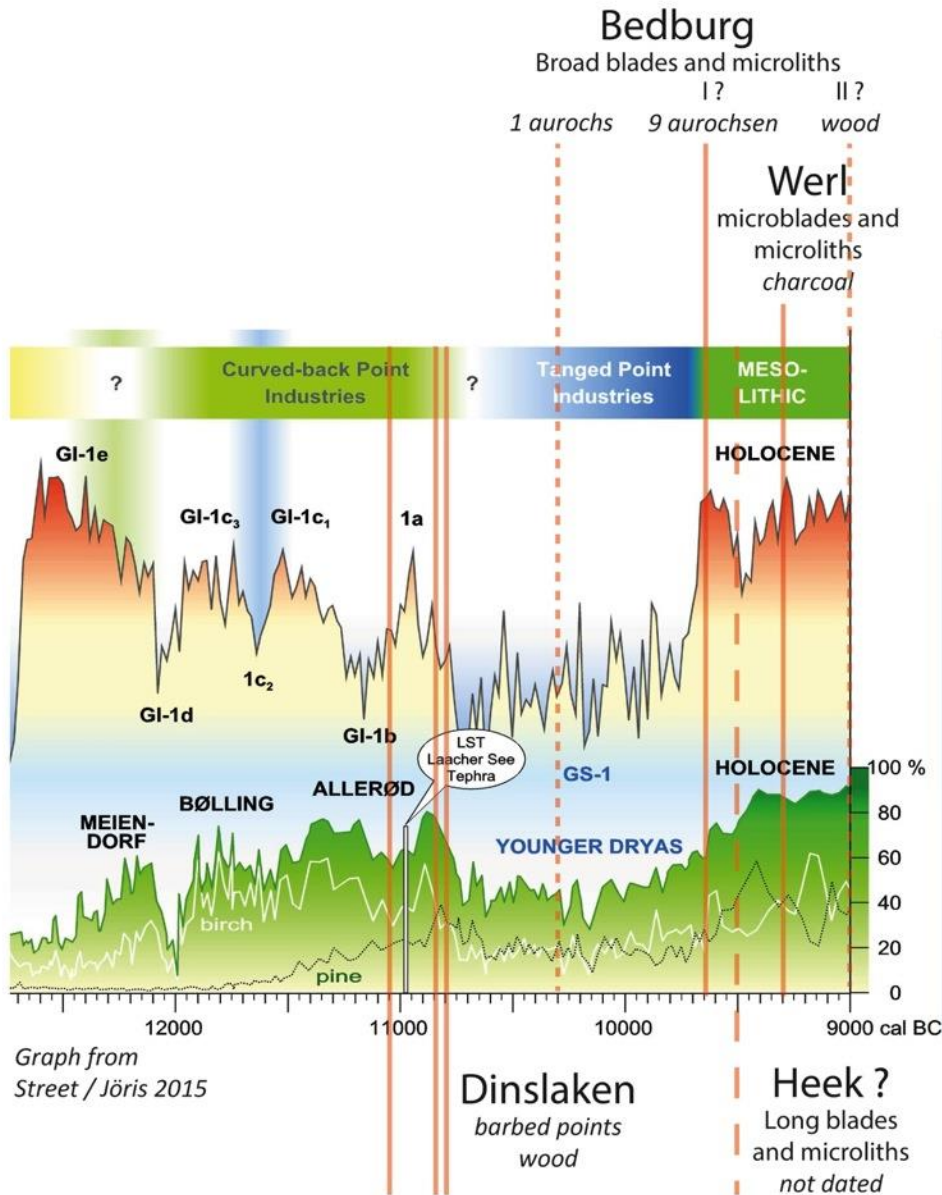
3. The Paleolithic-Mesolithic Transition
in Westphalia (Annabell Zander)



CAUTION

ongoing
investigations

Late Pleistocene and Early Holocene Transitions

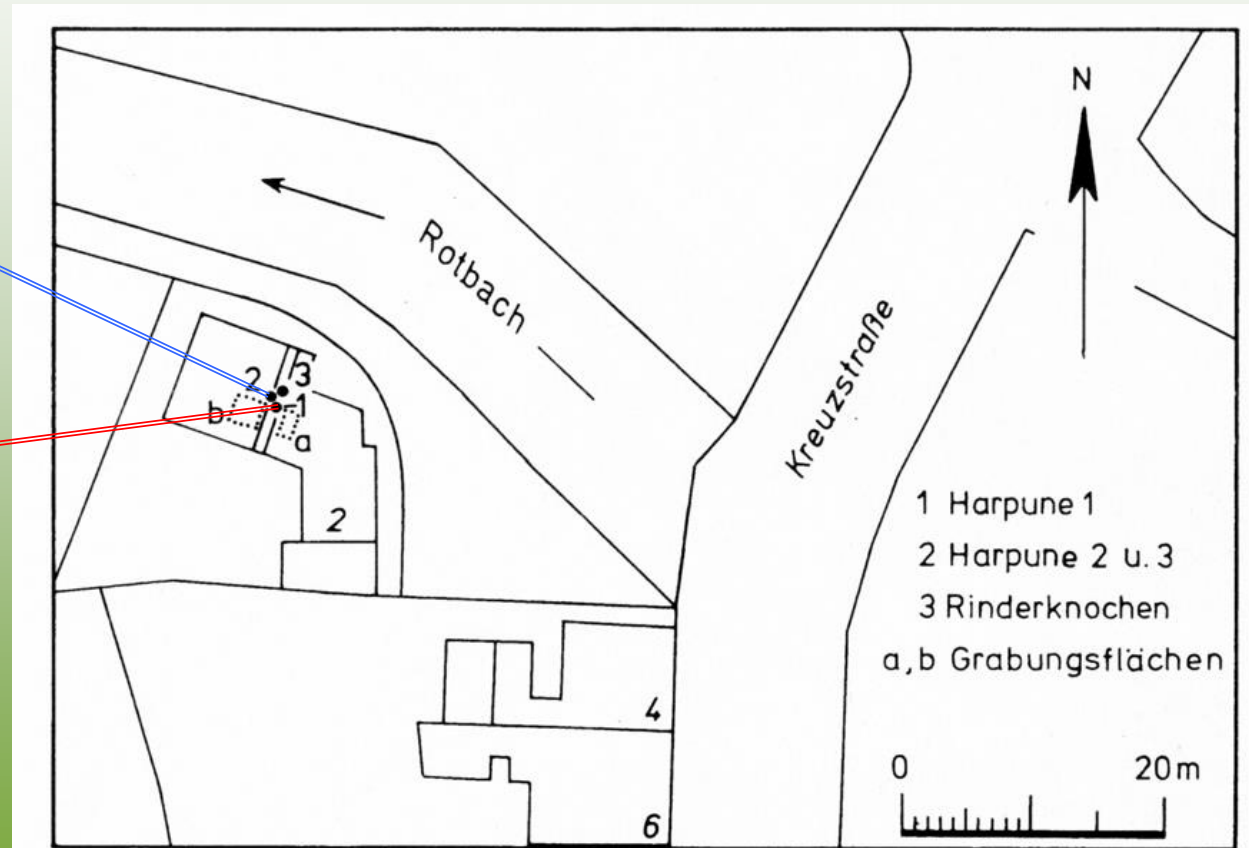
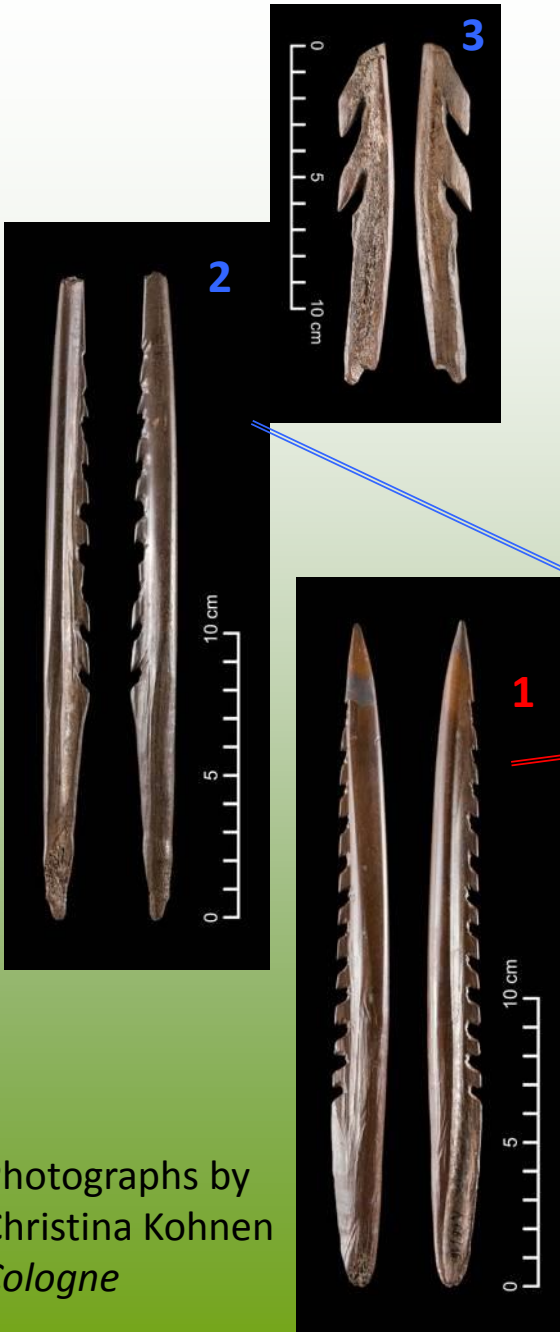


1. Absolute Dating of the Barbed Points from Dinslaken, Lower Rhine Area

Birgit Gehlen

1. Absolute Dating of the Barbed Points from Dinslaken, Lower Rhine Area

Stampfuss/Schüttrumpf 1970, Fig. 1



1 Dinslaken. Situationsplan der Fundstelle. – Maßstab 1 : 725.

1. Absolute Dating of the Barbed Points from Dinslaken, Lower Rhine Area

Photographs by
Christina Kohnen
Cologne



≈ 11.200 calBC



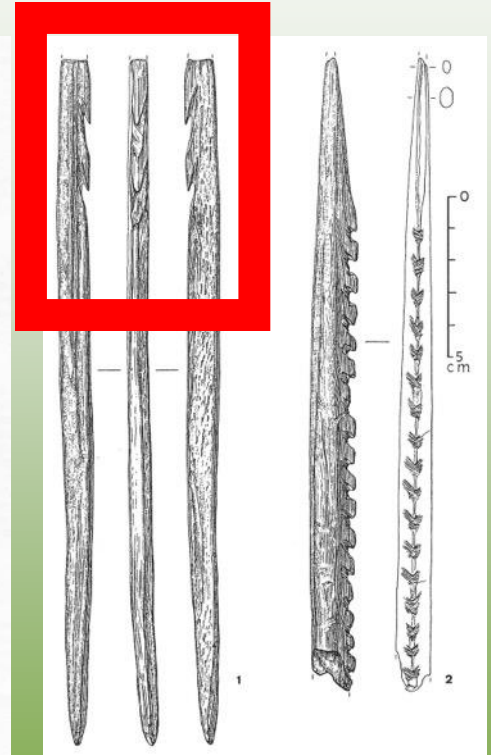
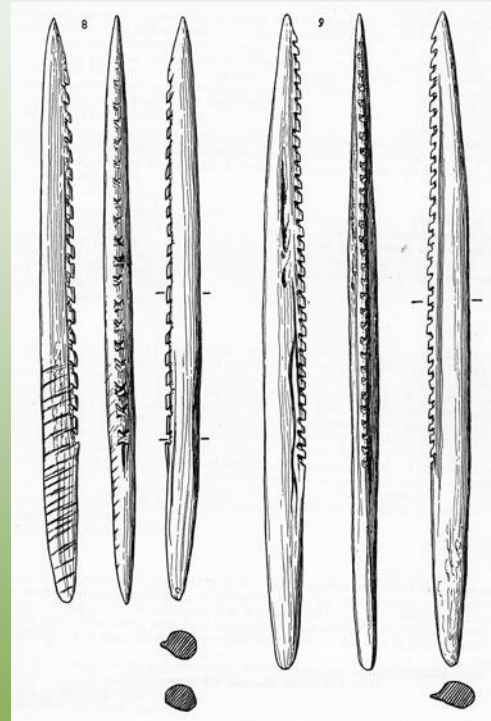
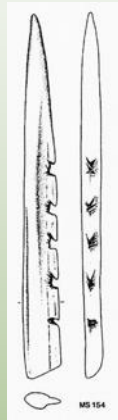
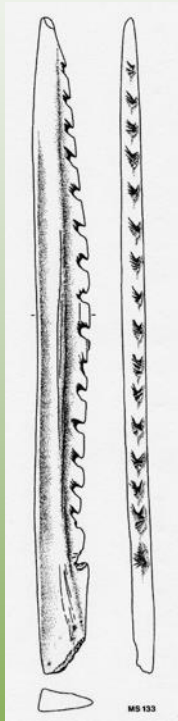
≈ 10.900 calBC



not dated

1. Absolute Dating of the Barbed Points from Dinslaken, Lower Rhine Area

Similar pieces from Europoort / Netherlands, from the United Kingdom, and the North Sea



Europoort / Rotterdam
not dated

Verhart 1988

Leman and
Ower Banks
≈ 11.800 calBC not dated

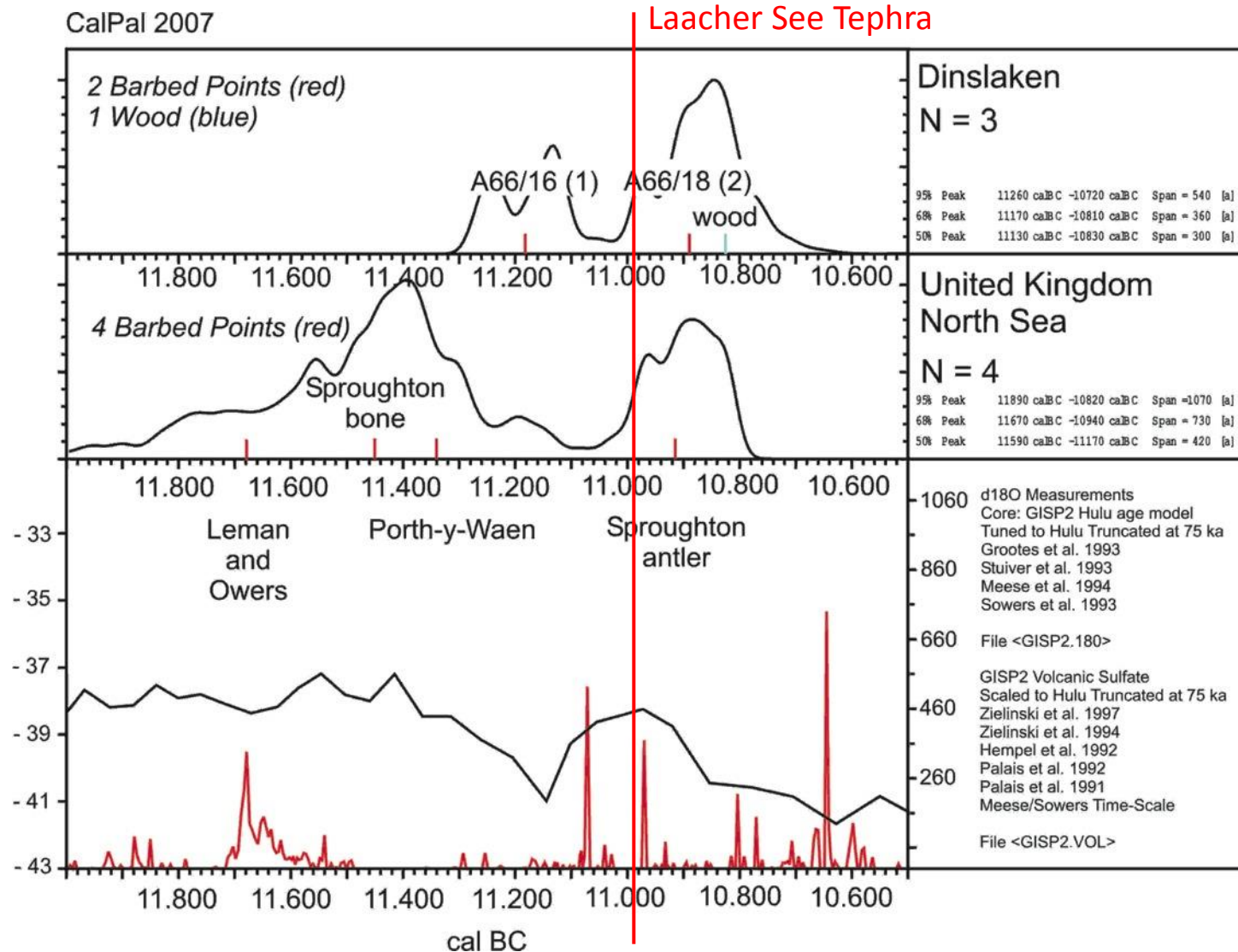
Clark/Godwin 1956

Sproughton 1 and 2
1 ≈ 10.900 calBC
2 ≈ 11.550 calBC

Jacobi et al. 2009

1. Absolute Dating of the Barbed Points from Dinslaken, Lower Rhine Area

Calibration of the dated barbed points from Dinslaken and dates of similar finds from the United Kingdom and the North Sea



1. Absolute Dating of the Barbed Points from Dinslaken, Lower Rhine Area

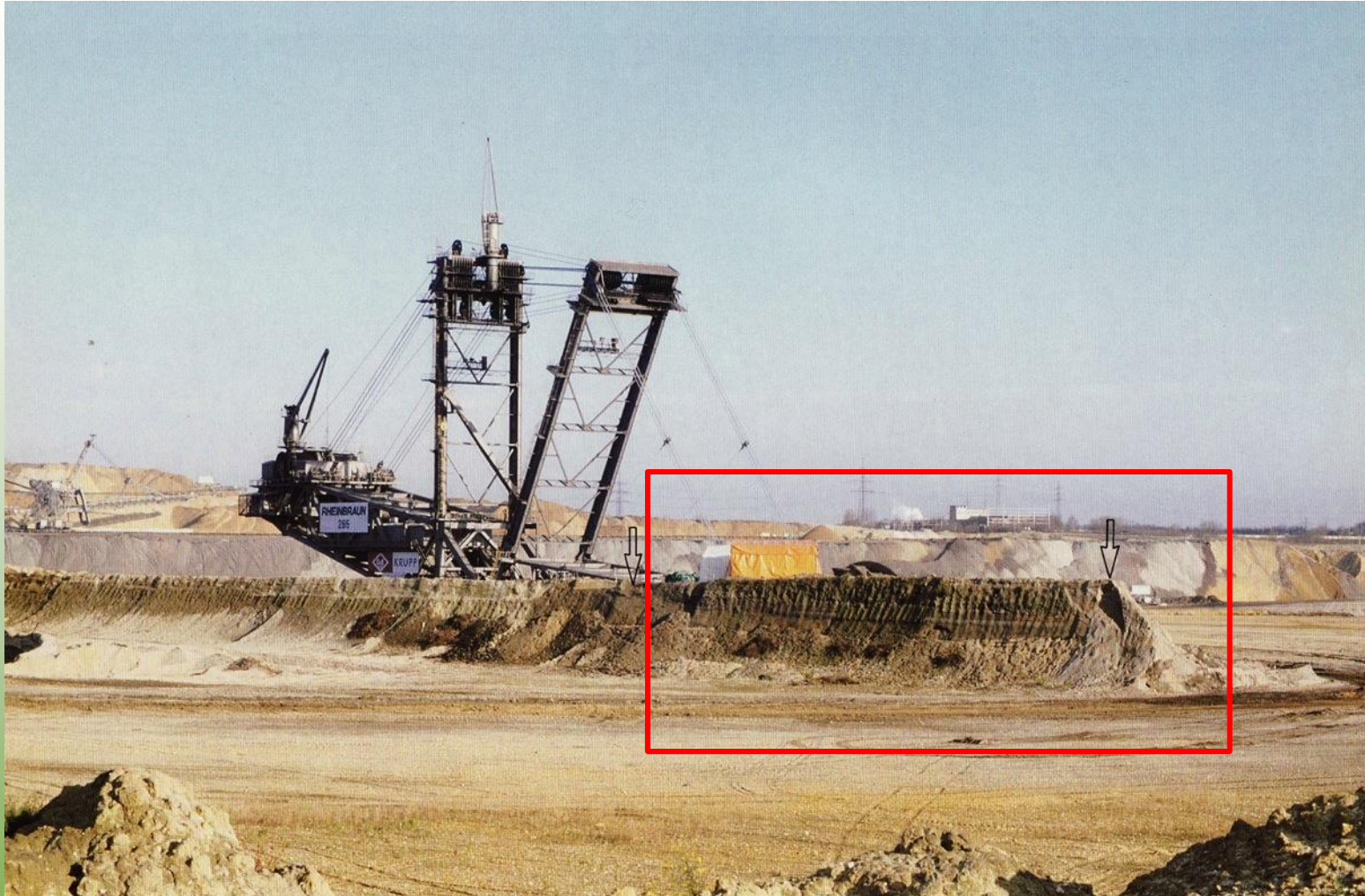
Map by William E. McNulty and Jerome N. Cookson, National Geographic Magazine



2. Absolute Dating of 10 aurochsen from Bedburg-Königshoven, Lower Rhine Area

Birgit Gehlen and Martin Street

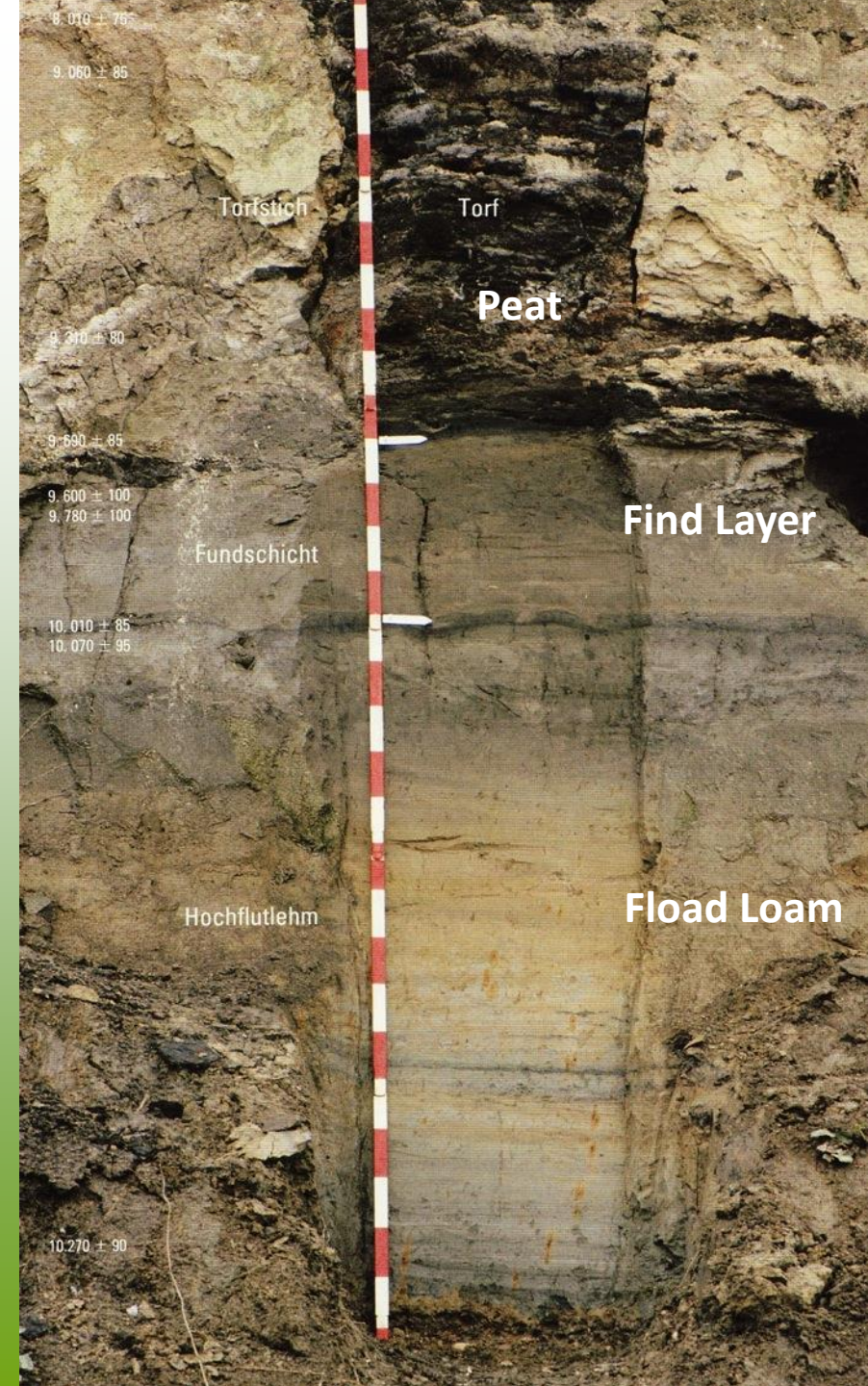
2. Absolute Dating of 10 aurochsen from Bedburg-Königshoven, Lower Rhine Area



The site of Bedburg-Königshoven in the Rhenish Lignite Mining Area in the former Erft Valley during excavation.

Photograph from Street 1989

2. Absolute Dating of 10 aurochs from Bedburg-Königshoven, Lower Rhine Area



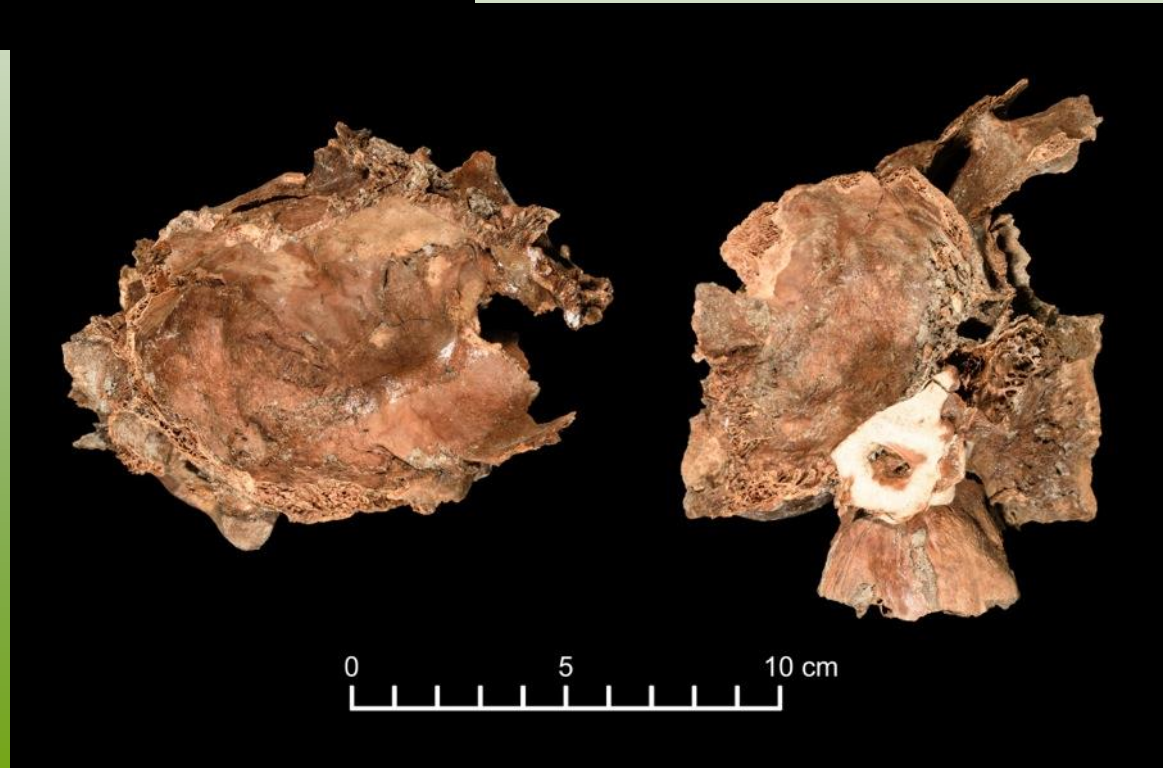
Photograph from Street 1989

2. Absolute Dating of 10 aurochsen from Bedburg-Königshoven, Lower Rhine Area



Metacarpus with
Cutmarks (white arrow)
COL 2675
 9617 ± 158 calBC

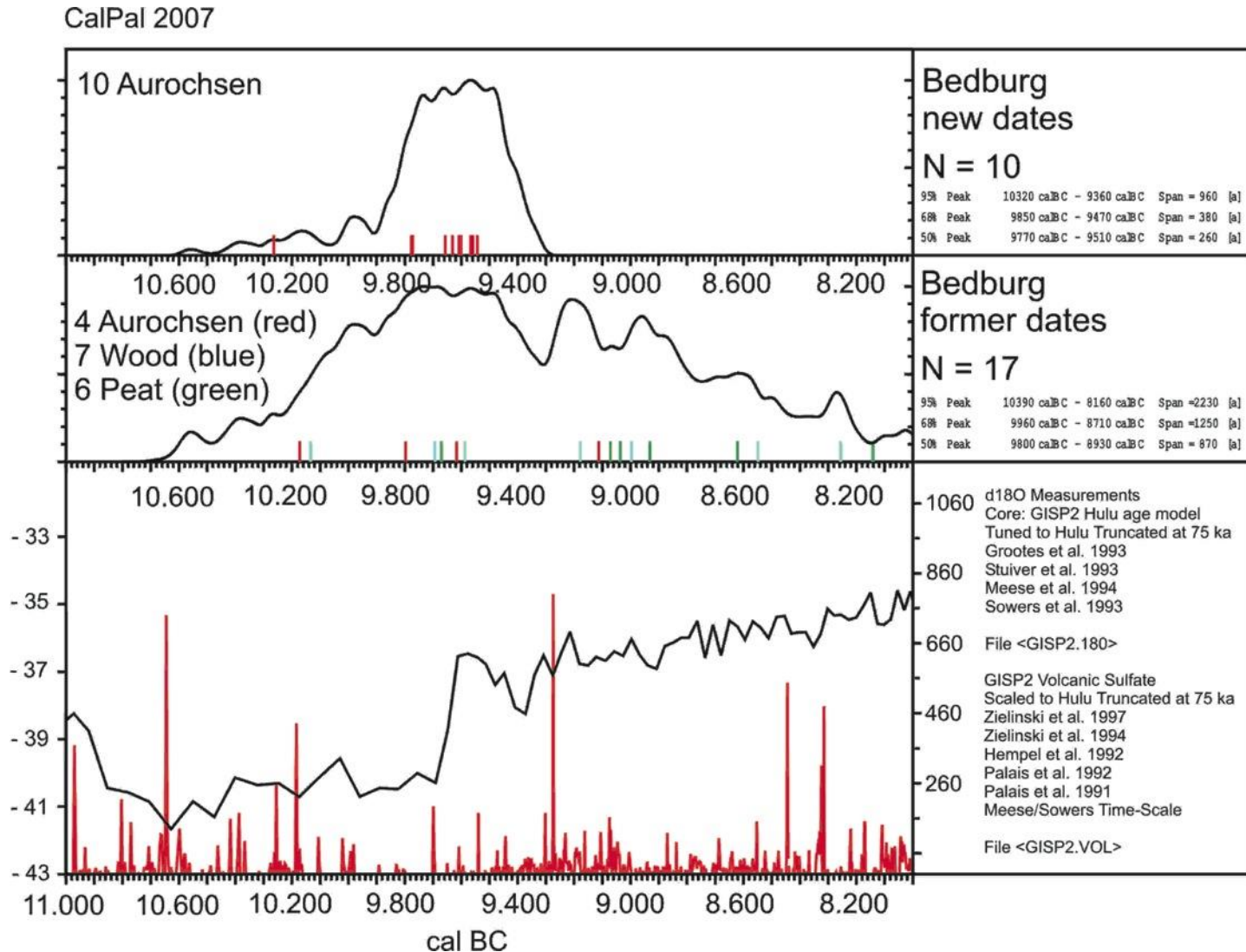
Skull fragments / pars petrosa
COL 2671.2.1
 9758 ± 191 calBC



Photographs by Christina Kohnen
Cologne

2. Absolute Dating of 10 aurochs from Bedburg-Königshoven, Lower Rhine Area

Calibration of the Dates from Bedburg-Königshoven

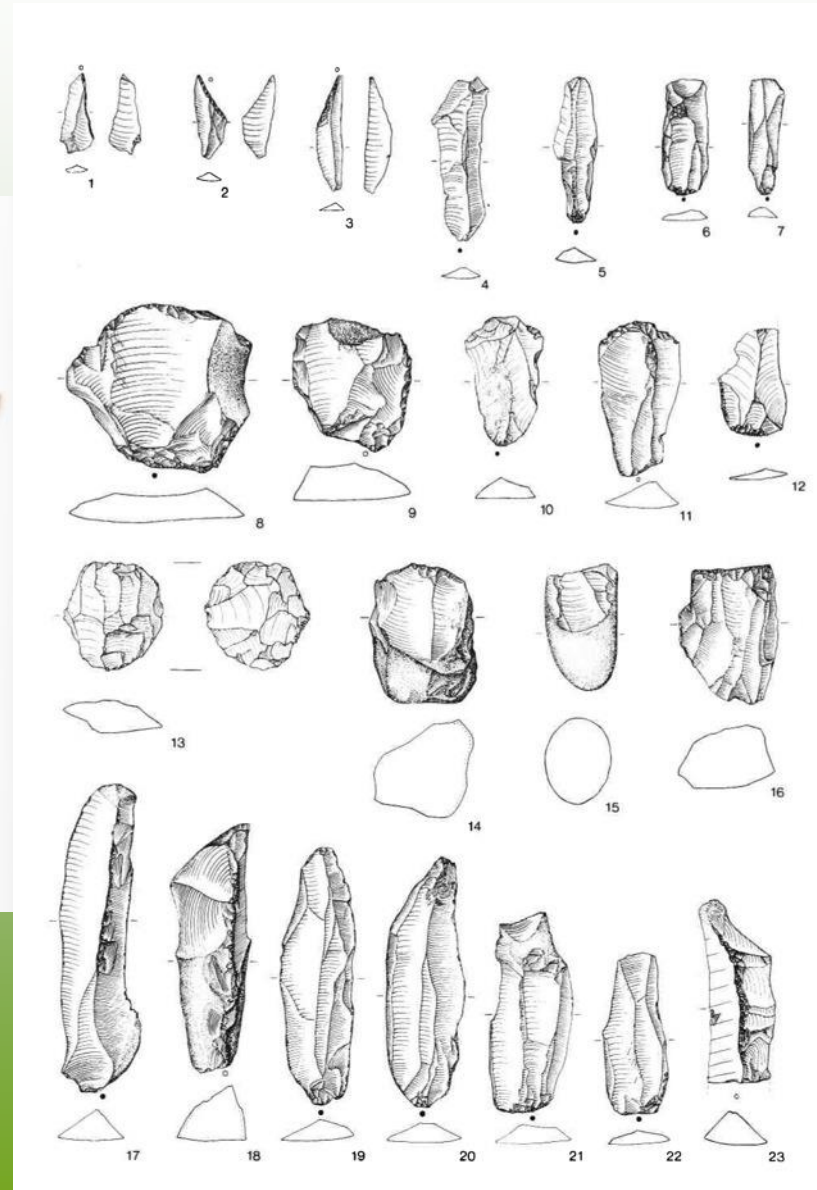


2. Absolute Dating of 10 aurochs from Bedburg-Königshoven, Lower Rhine Area

Street 1989

Antler Frontlets

Street/Wild 2014



Early or Middle Praeboreal ?

Microliths and Broad Blades

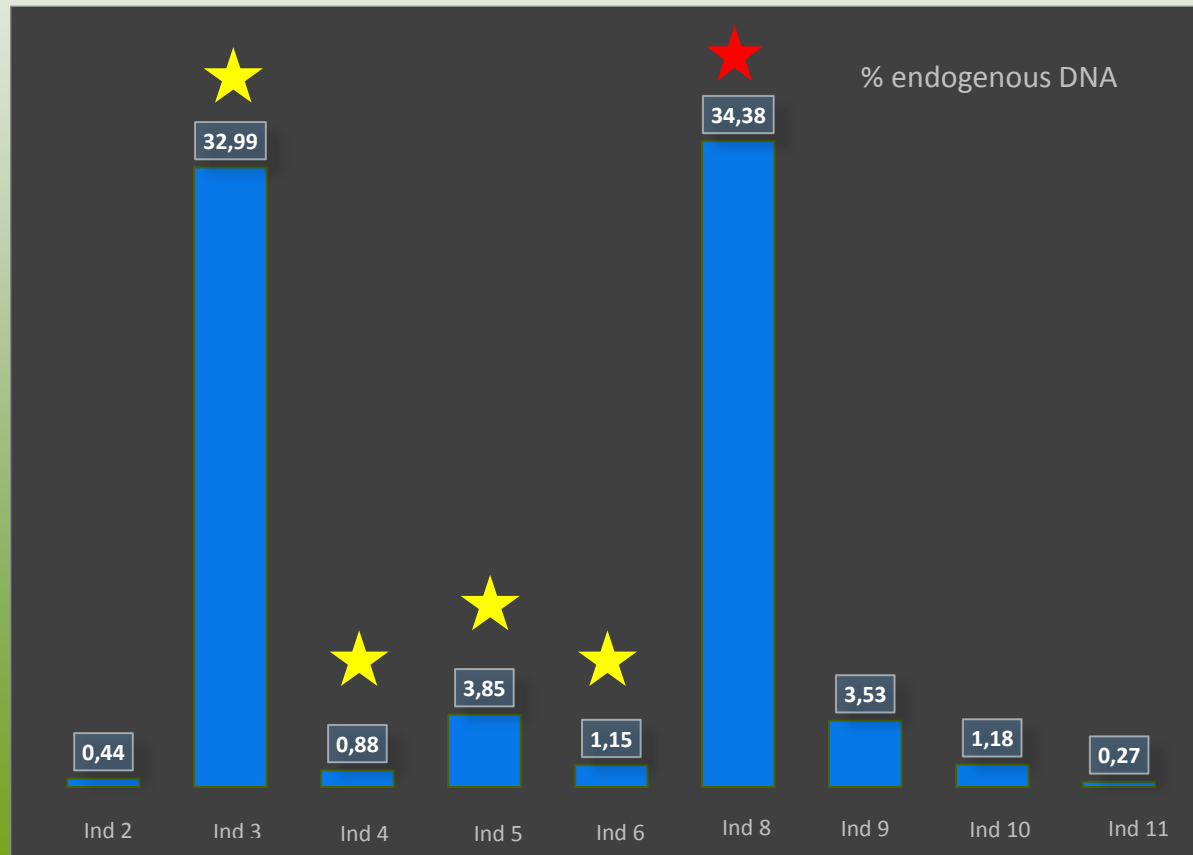
2.1 Decoding the genome of the European aurochs

Amelie Scheu

2.1 Decoding the genome of the European aurochs

Because of the excellent preservation of two Bedburg-Königshoven aurochs *pars petrosa* the bones are the essential foundation of an ongoing wild and domesticated cattle ancient DNA study.

The first aurochs genome from continental Europe will allow to explicitly test for admixture between local European wild cattle (aurochs, *Bos primigenius*) and imported Near Eastern Neolithic domesticated cattle (*Bos taurus*).



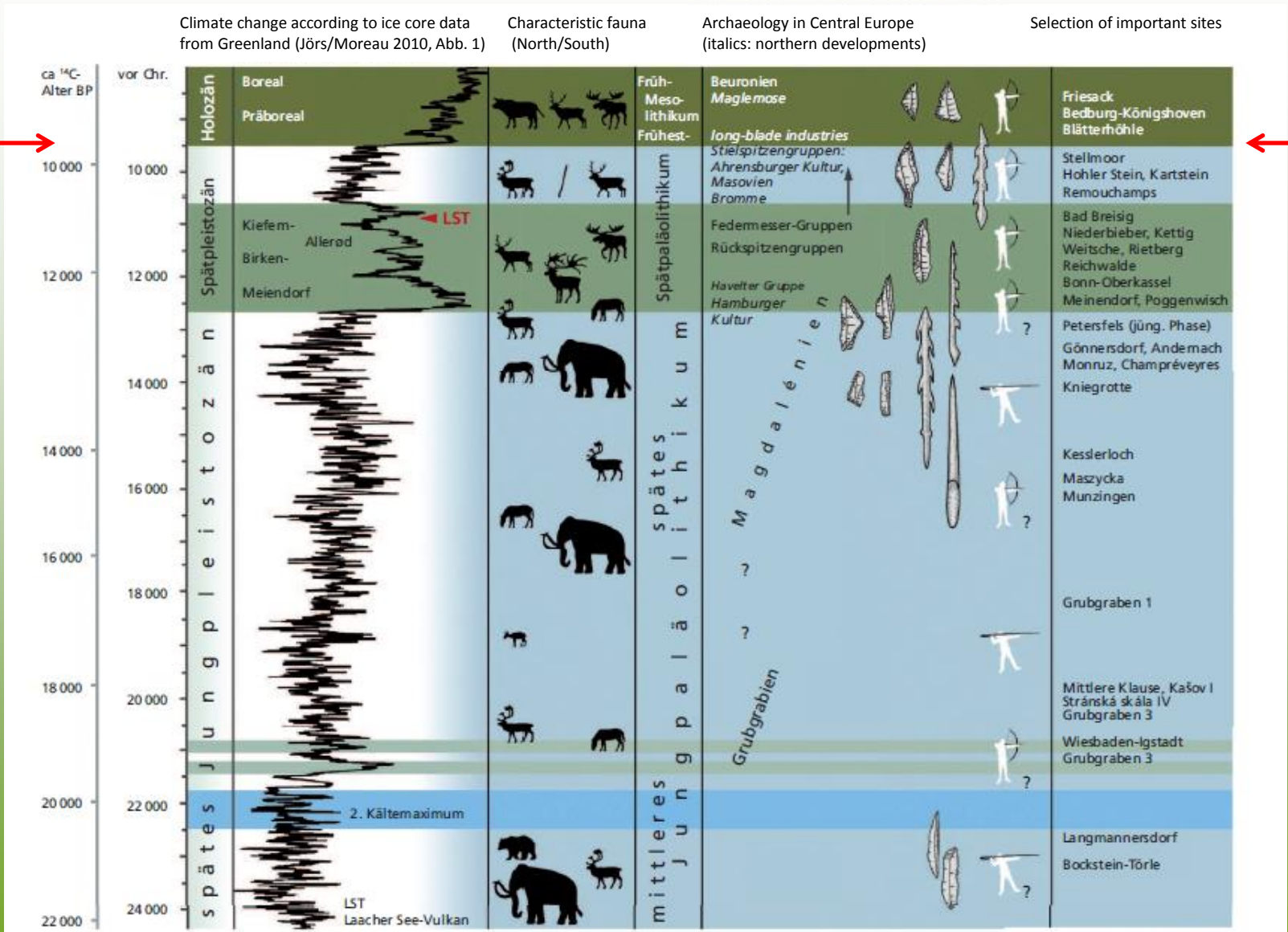
3. The Palaeolithic-Mesolithic transition in Westphalia

Annabell Zander

Master Thesis
MA Archaeology (Prehistory)

3. The Palaeolithic-Mesolithic transition in Westphalia

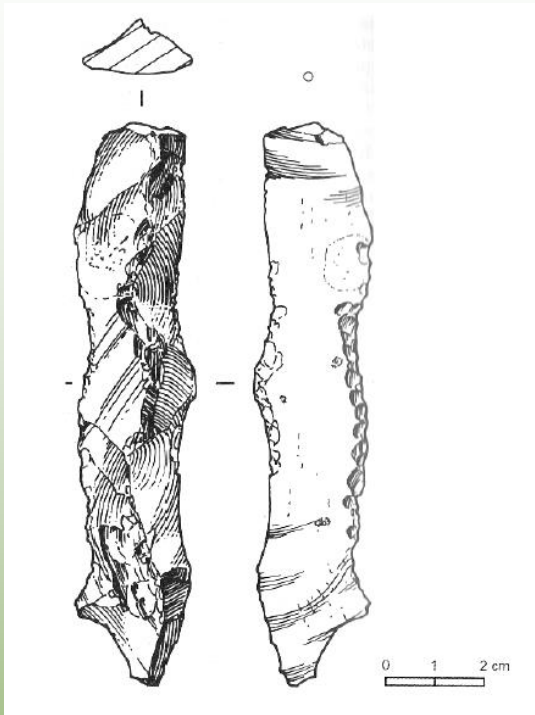
The Pleistocene-Holocene transition: the end of the last Ice Age



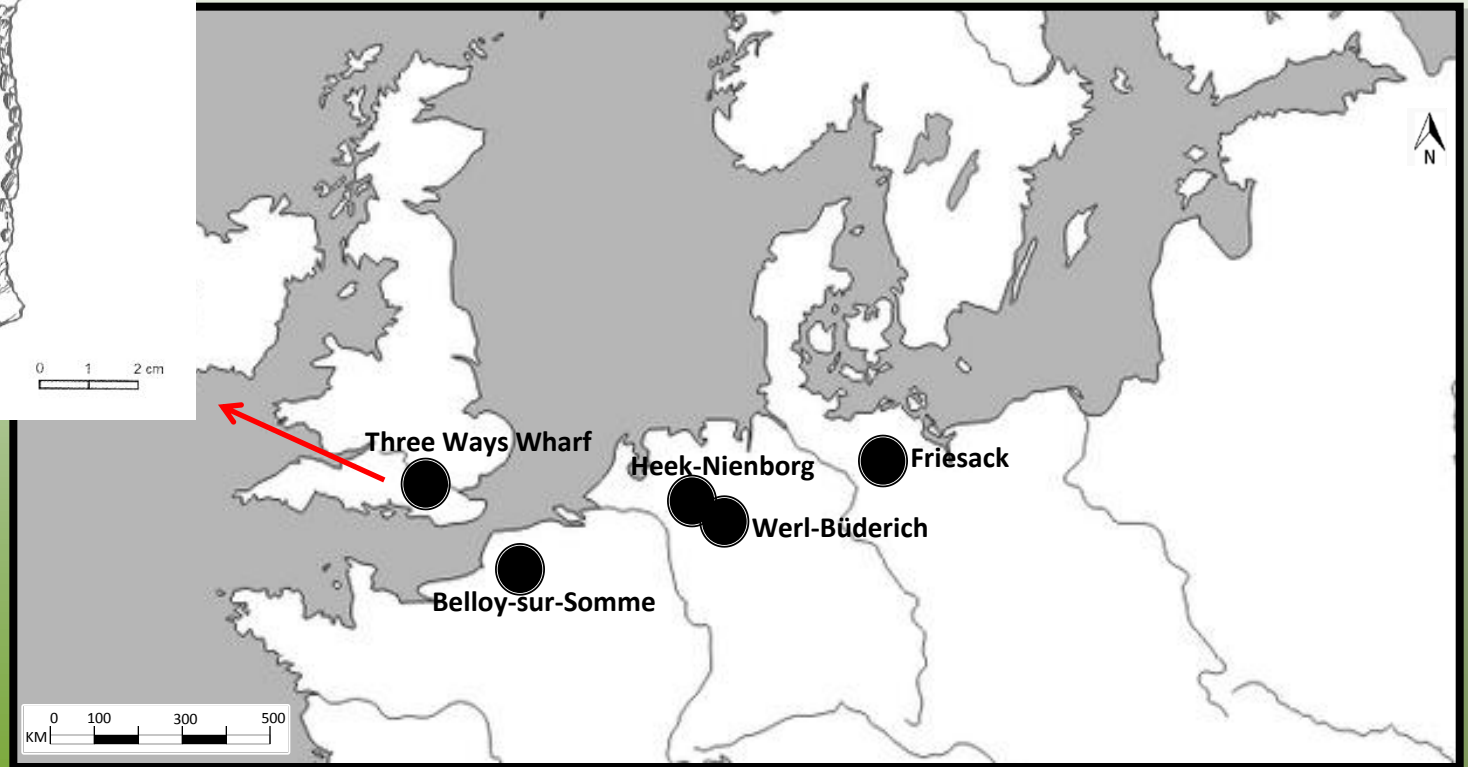
Climate change at the end of the last Ice Age (Baales 2014, 46).

3. The Palaeolithic-Mesolithic transition in Westphalia

Transitional assemblages: the long blade tradition



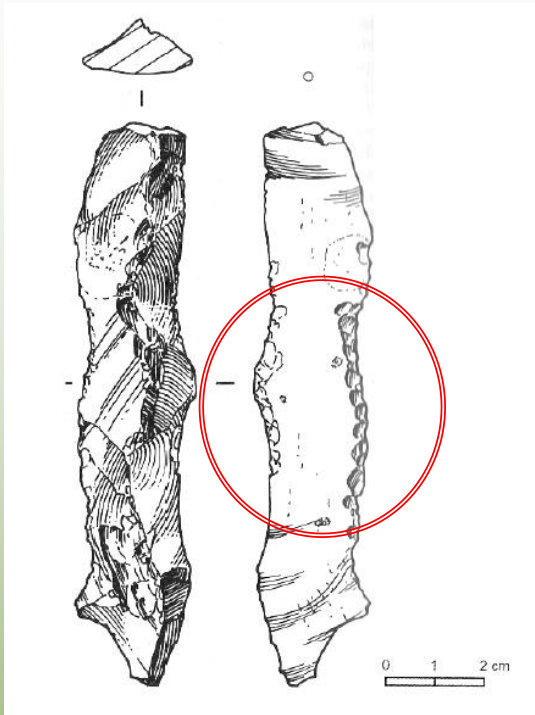
One long blade from Three Ways Wharf (Lewis 1991, 250)



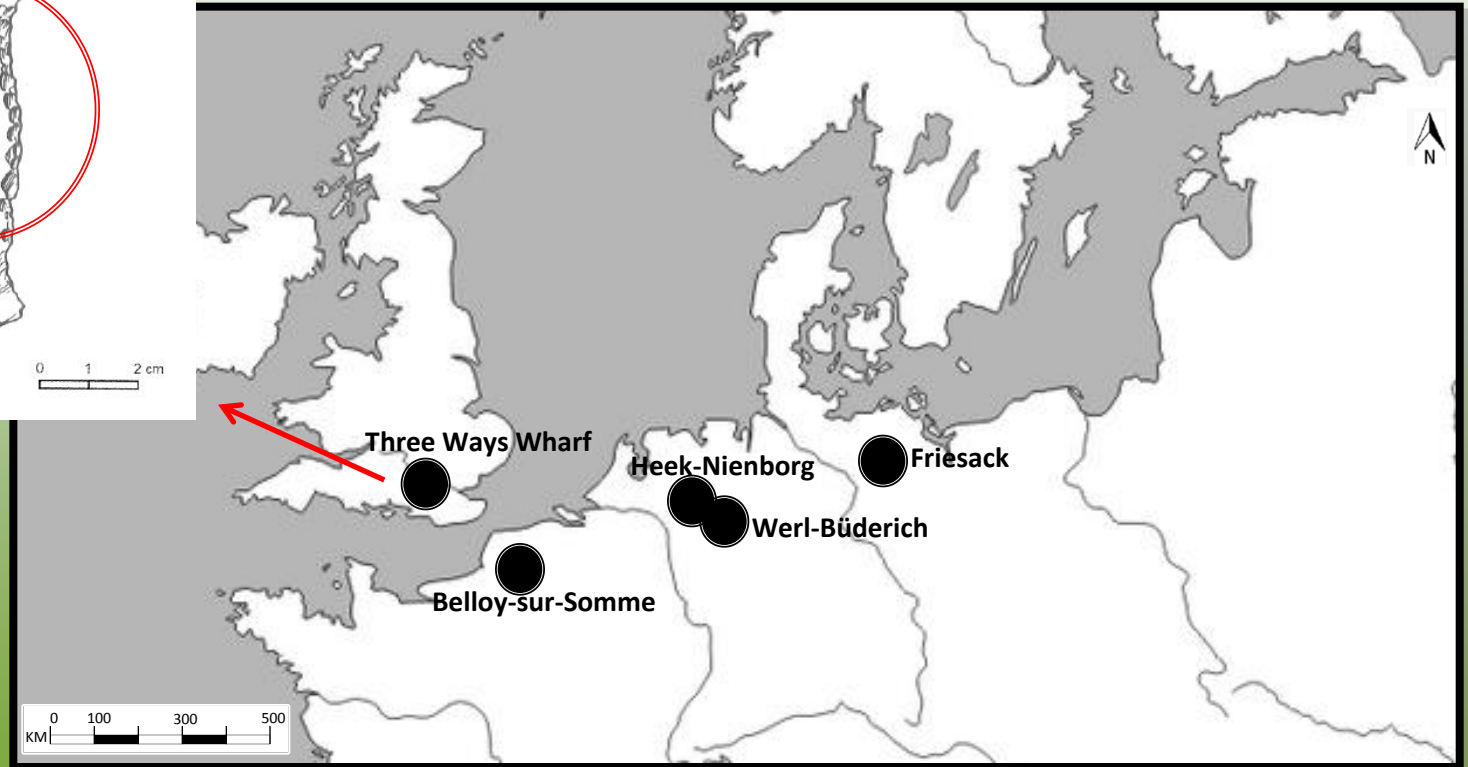
Long blade sites and Early Mesolithic sites mentioned in this presentation.

3. The Palaeolithic-Mesolithic transition in Westphalia

Transitional assemblages: the long blade tradition



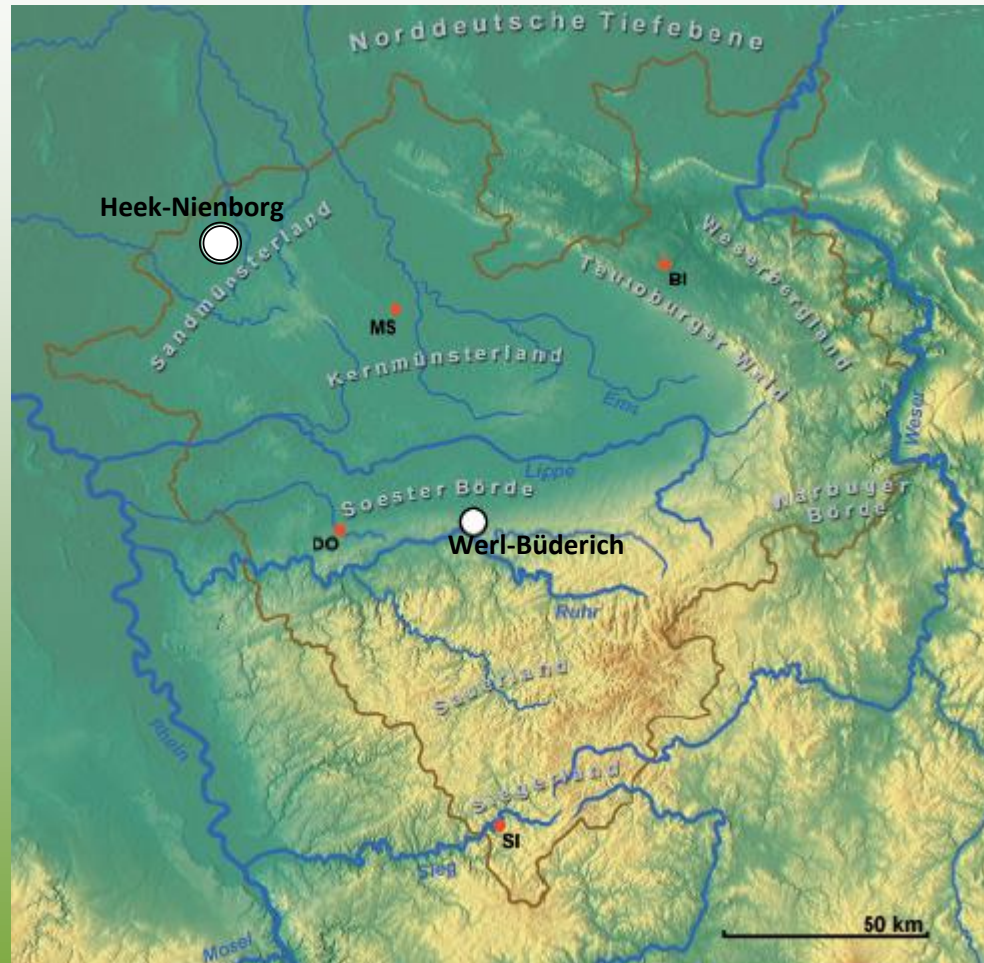
One long blade from Three Ways Wharf (Lewis 1991, 250)



Long blade sites and Early Mesolithic sites mentioned in this presentation.

3. The Palaeolithic-Mesolithic transition in Westphalia

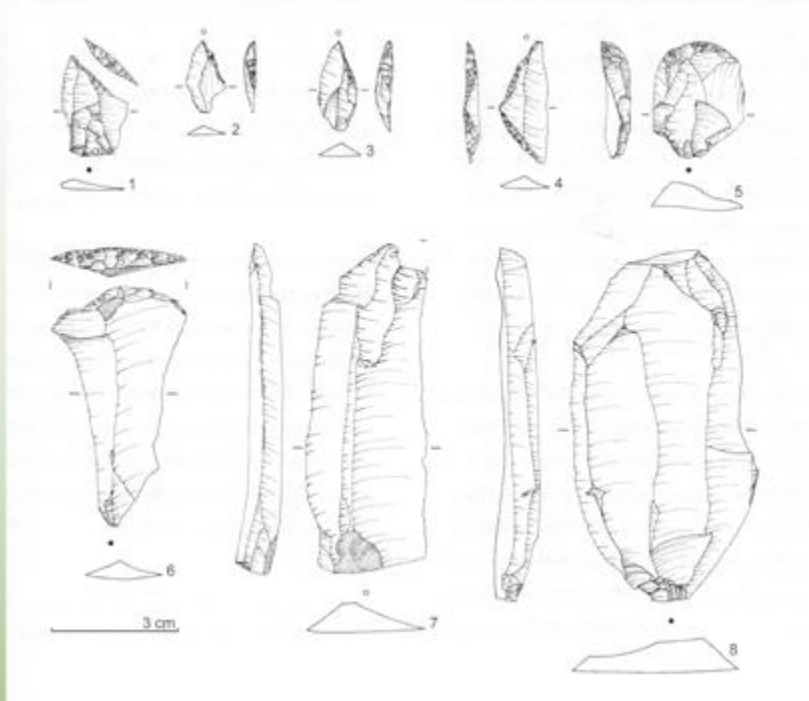
Heek-Nienborg and Werl-Büderich



The two analysed assemblages in Westphalia
(Heinen 2013, 9)

3. The Palaeolithic-Mesolithic transition in Westphalia

Heek-Nienborg and Werl-Büderich: a comparison



Lithics from Heek-Nienborg: 1-4: Microliths; 5-6: scrapers; 7: long blade; 8: large flake (Stapel 2013, 161).



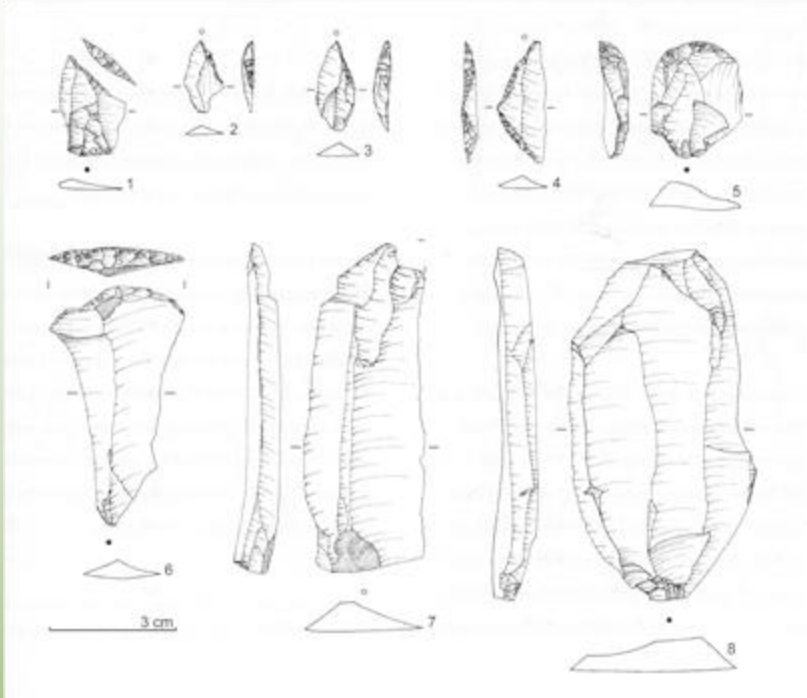
Lithics from Werl-Büderich: Left: large flake; right: Microliths (Heinen 2013, 31).

Site	Number of lithic artefacts	Number of flakes	Number of blades	Minimum/Maximum Length of blades
Werl-Büderich	188	31	9	11 mm/26 mm
Heek-Nienborg	358	179	103	several blades up to 80 mm

Composition of the Werl and Heek assemblages.

3. The Palaeolithic-Mesolithic transition in Westphalia

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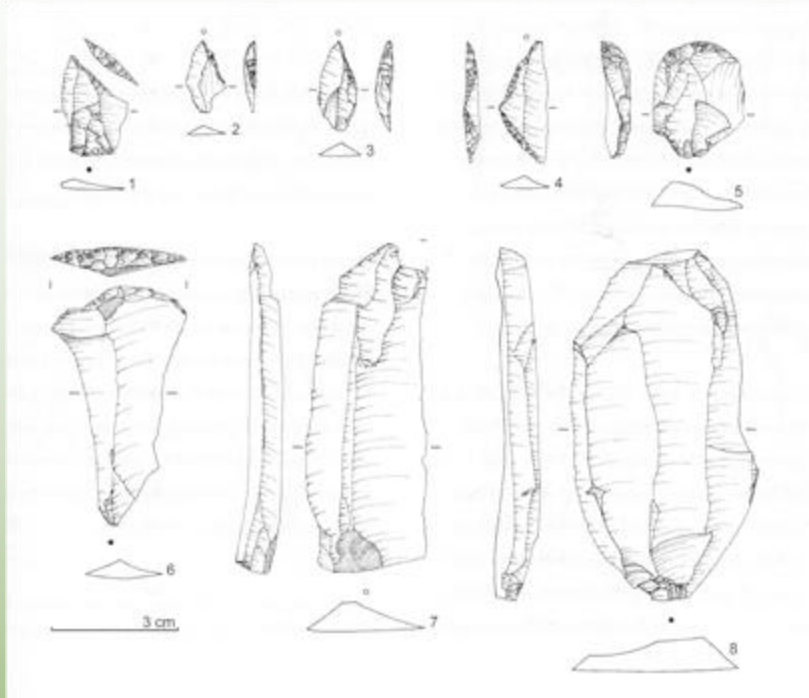
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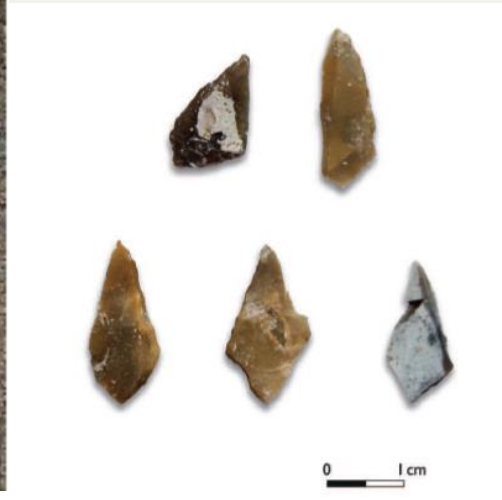
Composition of the Werl and Heek assemblages.

3. The Palaeolithic-Mesolithic transition in Westphalia

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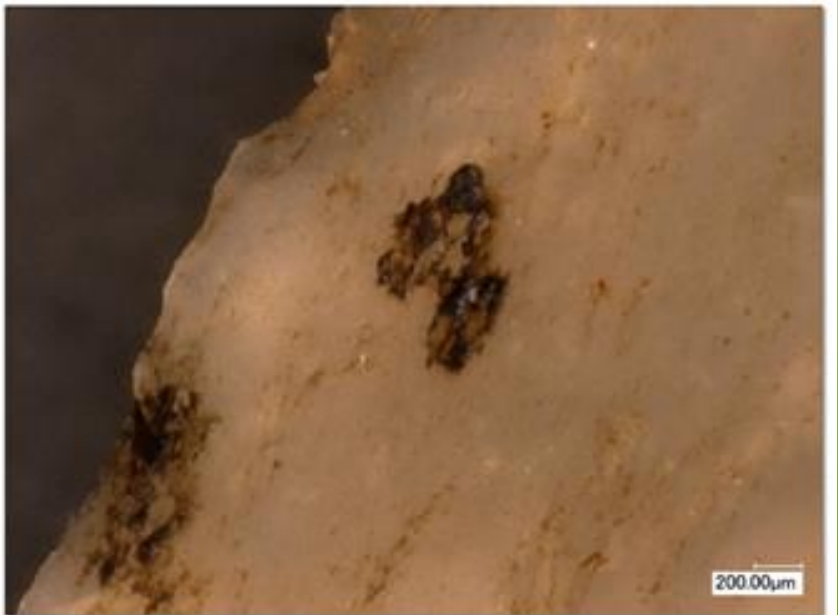
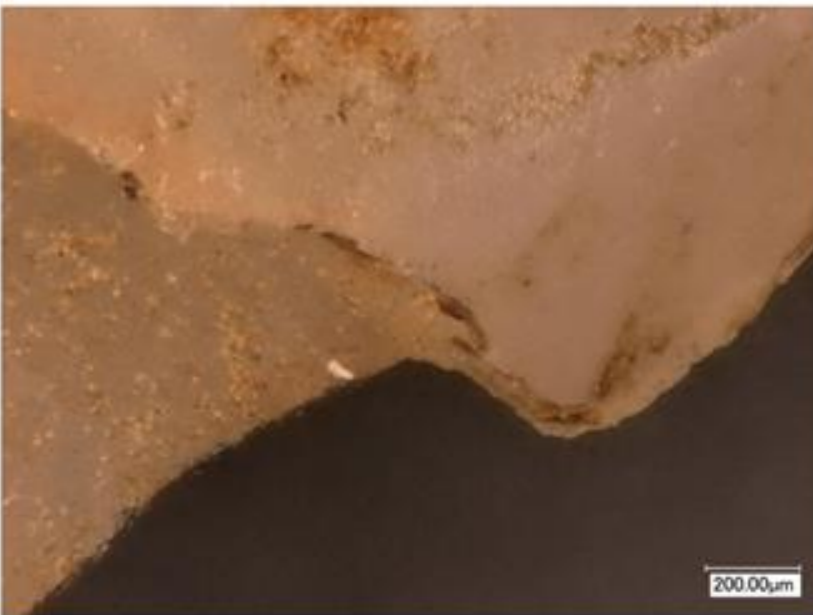
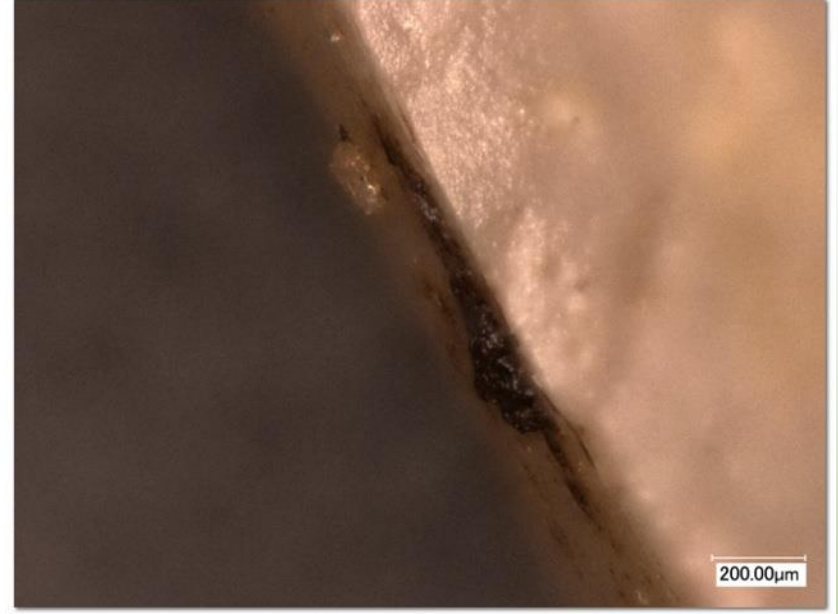
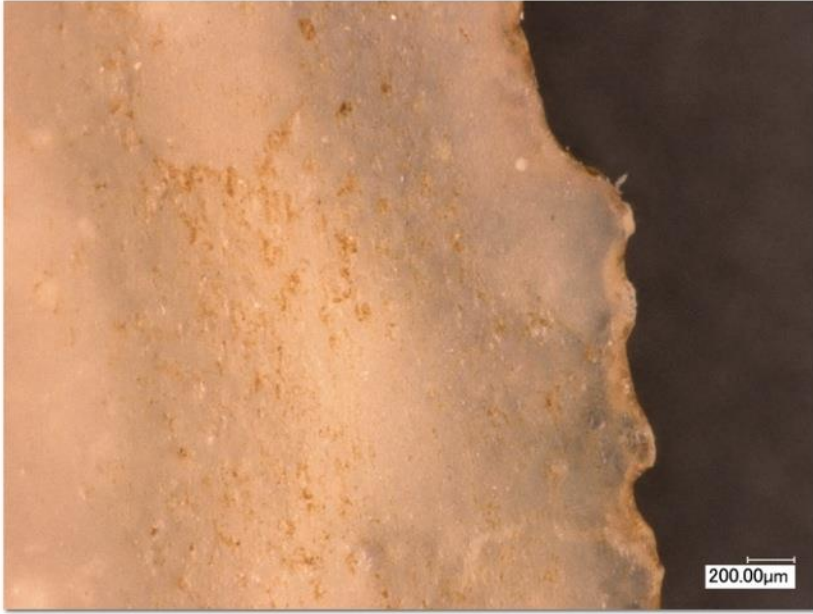


Lithics from Werl-Büderich: Left: large flake; right: Microliths (Heinen 2013, 31).

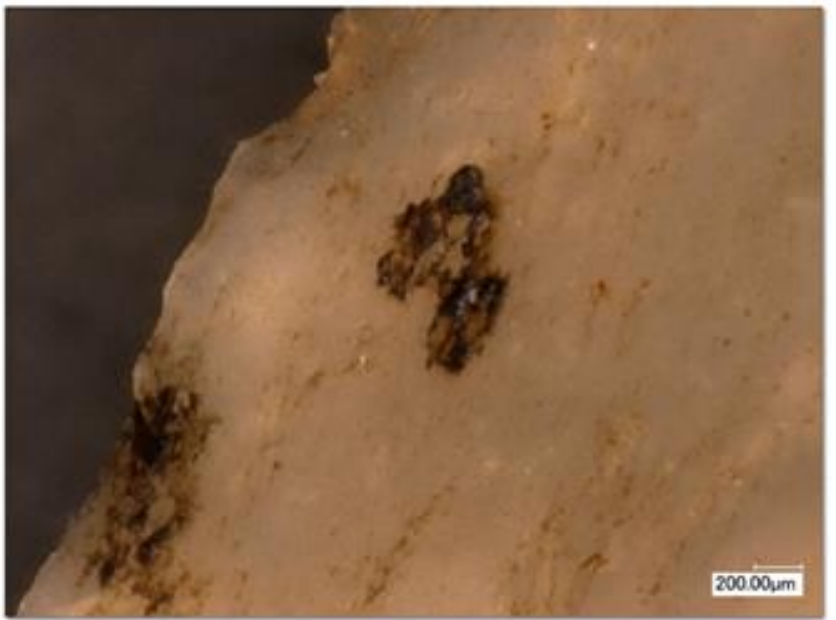
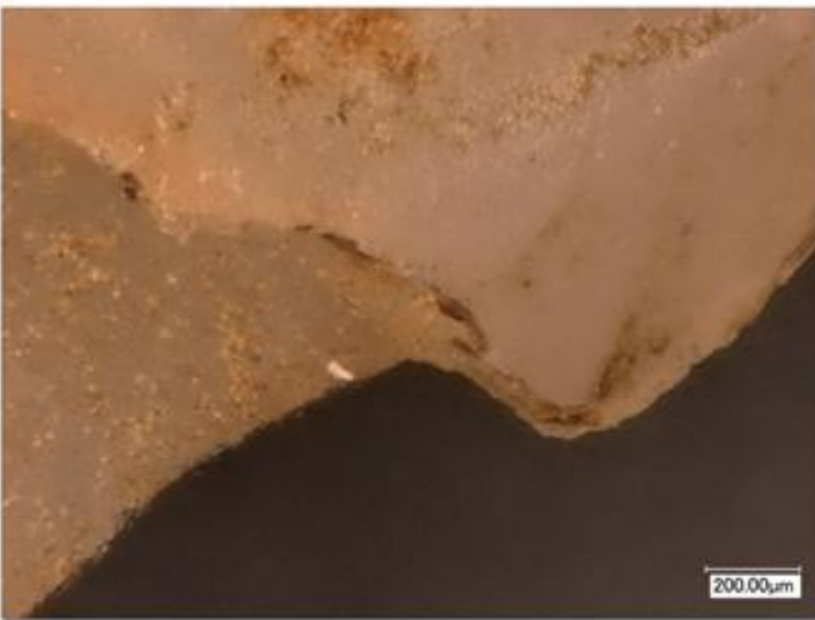
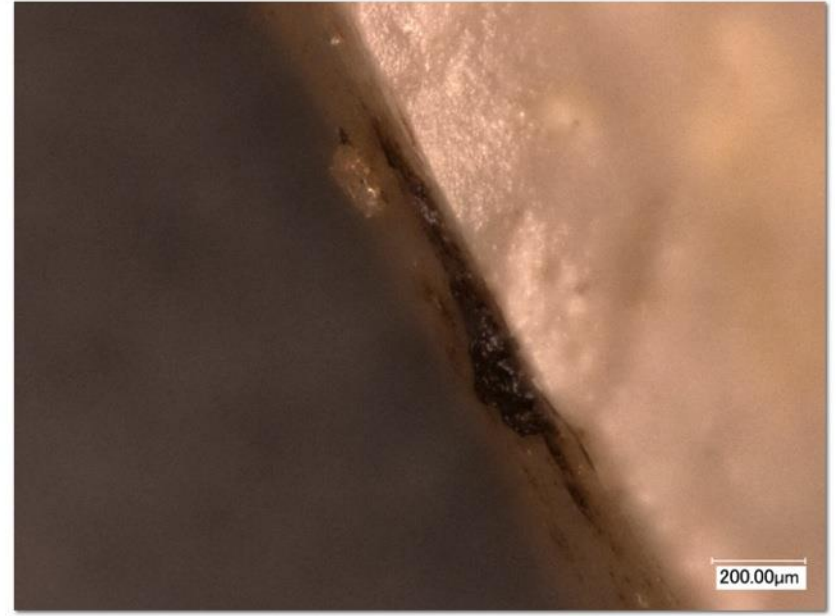
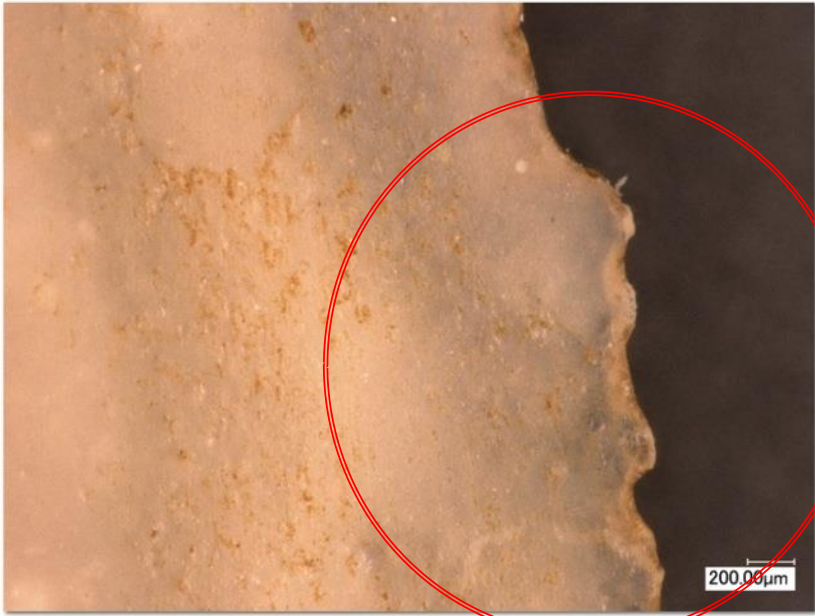
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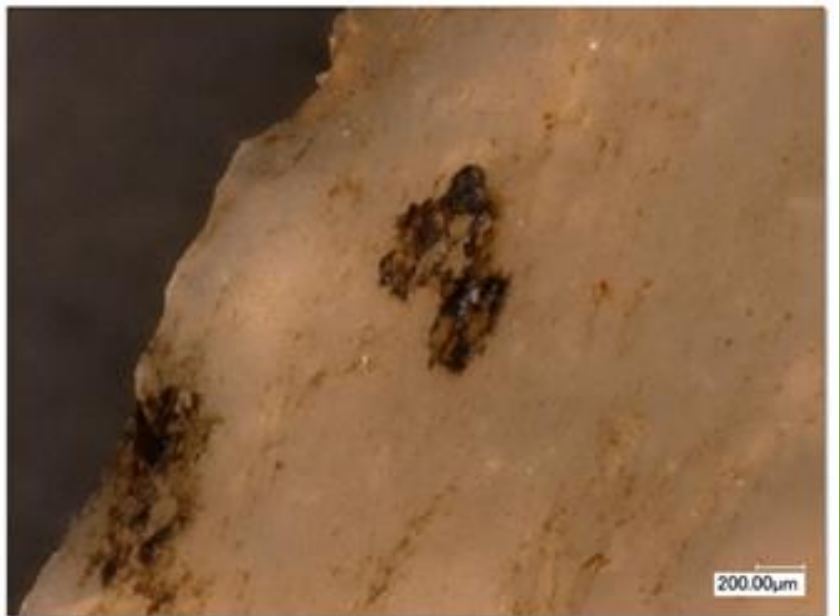
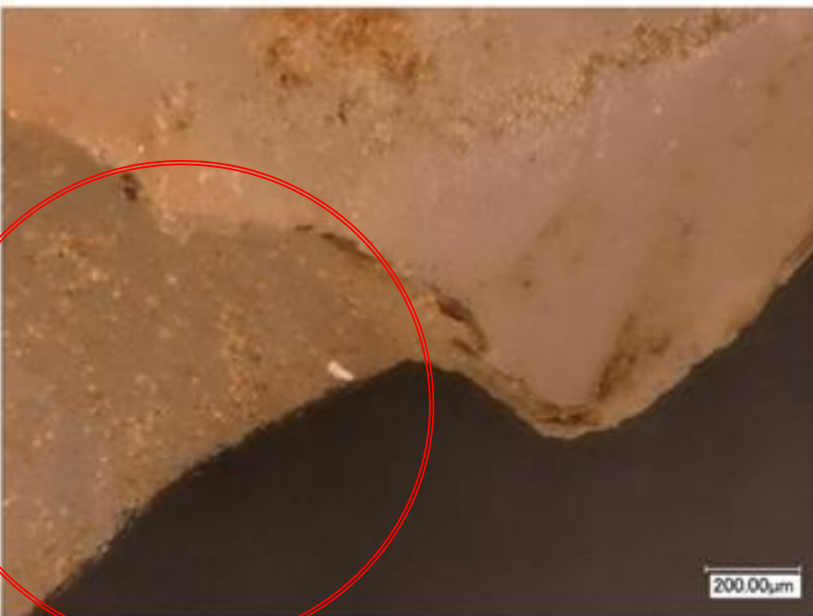
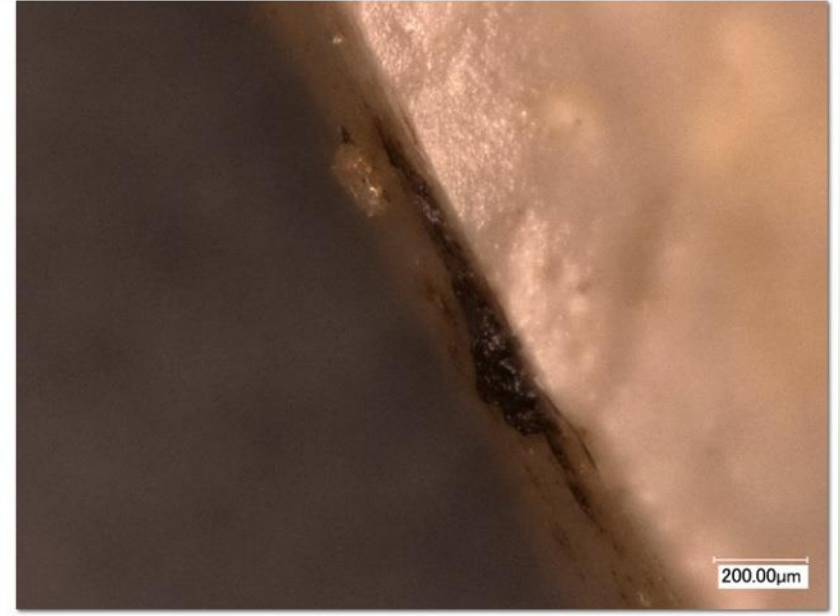
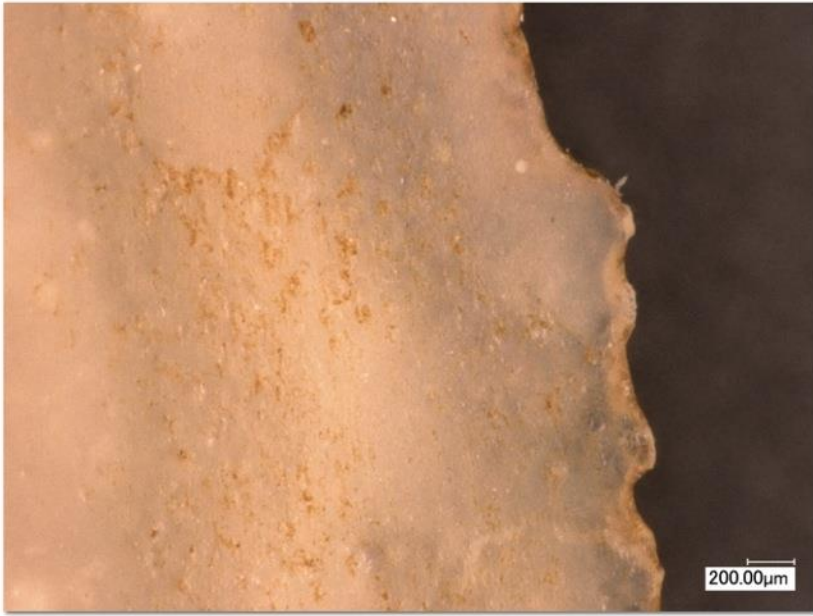
Heek-Nienborg: resin residues



Heek-Nienborg: resin residues



Heek-Nienborg: resin residues





Thank you

Michael Baales

Laurent Brou

Bernhard Buhs

Ronny Friedrich

Martin Heinen

Edgar Hellwig

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Bettina Lutzke

Christian Matzke

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Werner Schön

Bernhard Stapel

Peter Theissen

Friederike Waentig

Kai Vogl

Oliver Vogels

Andrea Yates

Andreas Zimmermann

for your attention