



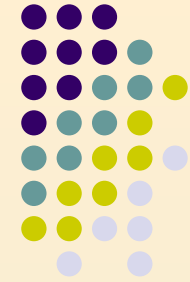
INSTITUTE OF ARCHAEOLOGY OF THE CAS, PRAGUE, v. v. i.

EVALUATION 2010-2014

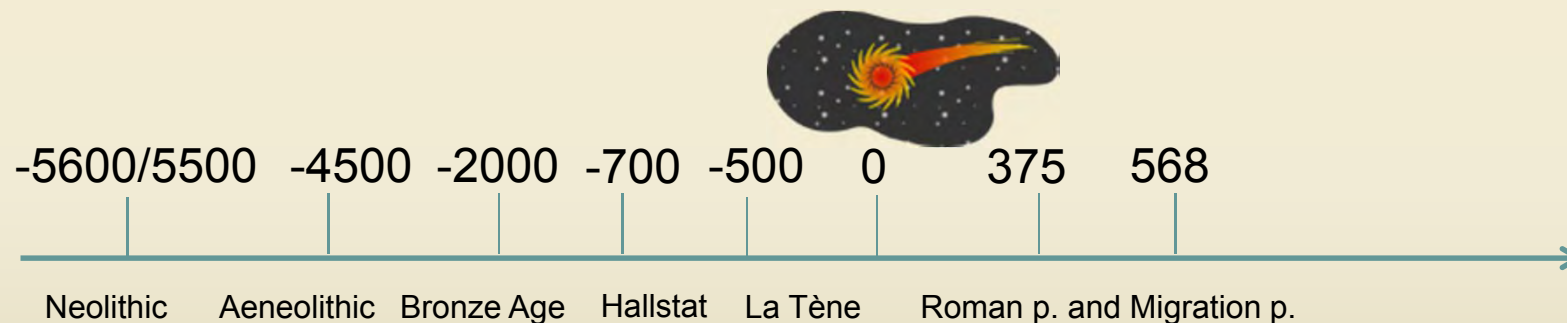
DEPARTMENT OF PREHISTORY

Prague – 20th October 2015

Department of Prehistory: research focus

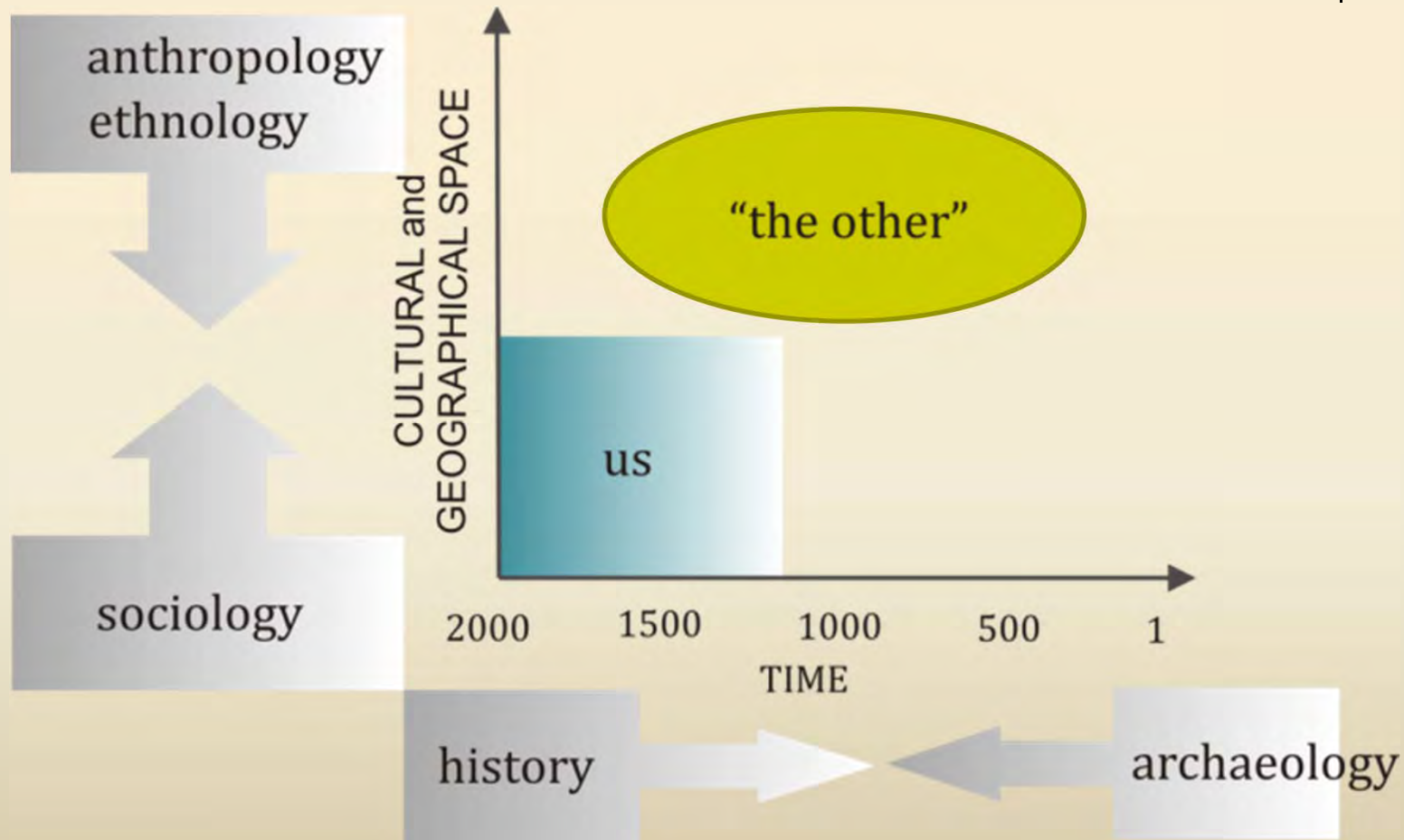
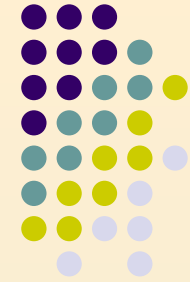


- the department as a whole focuses in detail on the prehistoric period only: the Neolithic and later periods.
- so called „non-written past“
- this means that the department’s members are able to engage in theoretical and fieldwork research of the earliest human culture.

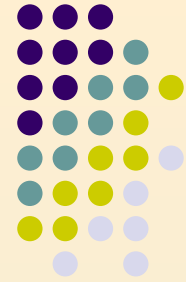


Department of Prehistory: research focus

- Focus on the study of human **culture**: seen not just as adaptation
- Concept of „**the other**“ as opposite to the Western civilisation



Department of Prehistory: two

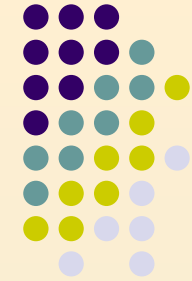


Two workplaces of the Department of Prehistory:

1. Prague, Letenská st. 4
2. Kutná Hora (former fieldwork expedition of Neolithic site in Bylany)



Department of Prehistory (DoP)



Head

Mgr. Petr Květina, Ph.D.
phone 363 office no. 217

Deputy head

PhDr. Miroslav Dobeš, Ph.D.
phone 374 office no. 216

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phone 346 office no. 23

PhDr. Miloslav Chytráček, Ph.D.
phone 345 office no. 208

Mgr. Petr Limburský, Ph.D.
phone 365 office no. 209

PhDr. Jiří Militký, Ph.D.
phone 407 office no. 113

Mgr. Jaroslav Řídký, Ph.D.
phone 337 office no. 211

Doc. PhDr. Vladimír Salač, CSc.
phone 356 office no. 210

Doc. PhDr. Luboš Jiráň, CSc.
phone 331 Director office

Personal structure

Researchers - Kutná Hora

Mgr. Markéta Končelová, Ph.D.
phone 327511731 Kutná Hora

PhDr. Radka Šumberová, Ph.D.
phone 327511730 Kutná Hora

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phone 365 office no. 209

Mgr. Olga Trojánková
phone 302 office no. 35

Mgr. Petr Vavrečka
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**Libuše Kombercová, Jan Komberec,
Jana Poupová, Otto Vlasák**
phone 327511730 Kutná Hora

Ph.D. students

Mgr. Pavel Burgert
phone 327511730 Kutná Hora

Mgr. Jiří Unger
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Mgr. Filip Velímský, Ph.D.
phone 327511731 Kutná Hora

Mgr. Klára Neumannová
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Mgr. Kateřina Kleinová
phone 365 office no.291

Postdocs

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phone 327511730 Kutná Hora

Mgr. Clément Nicolas, Ph.D.
phone 362 office no. 218

Scholars emeritus

Prof.PhDr. Ivan Pavlů, DrSc.
phone 358 office no.211

Doc.PhDr. Slavomil Vencl, DrSc.
phone 305

PhDr. Marie Zápotocká, CSc.
phone 362

PhDr. Milan Zápotocký, CSc.
phone 362

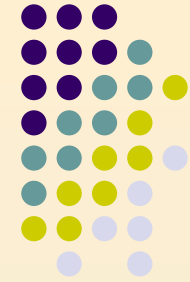
Present state:

- 11 researchers
- 2 postdocs
- 5 Ph.D. students
- 4 emeritus
- 10 technical staff

29 staffers of
DoP
+ 3 retired

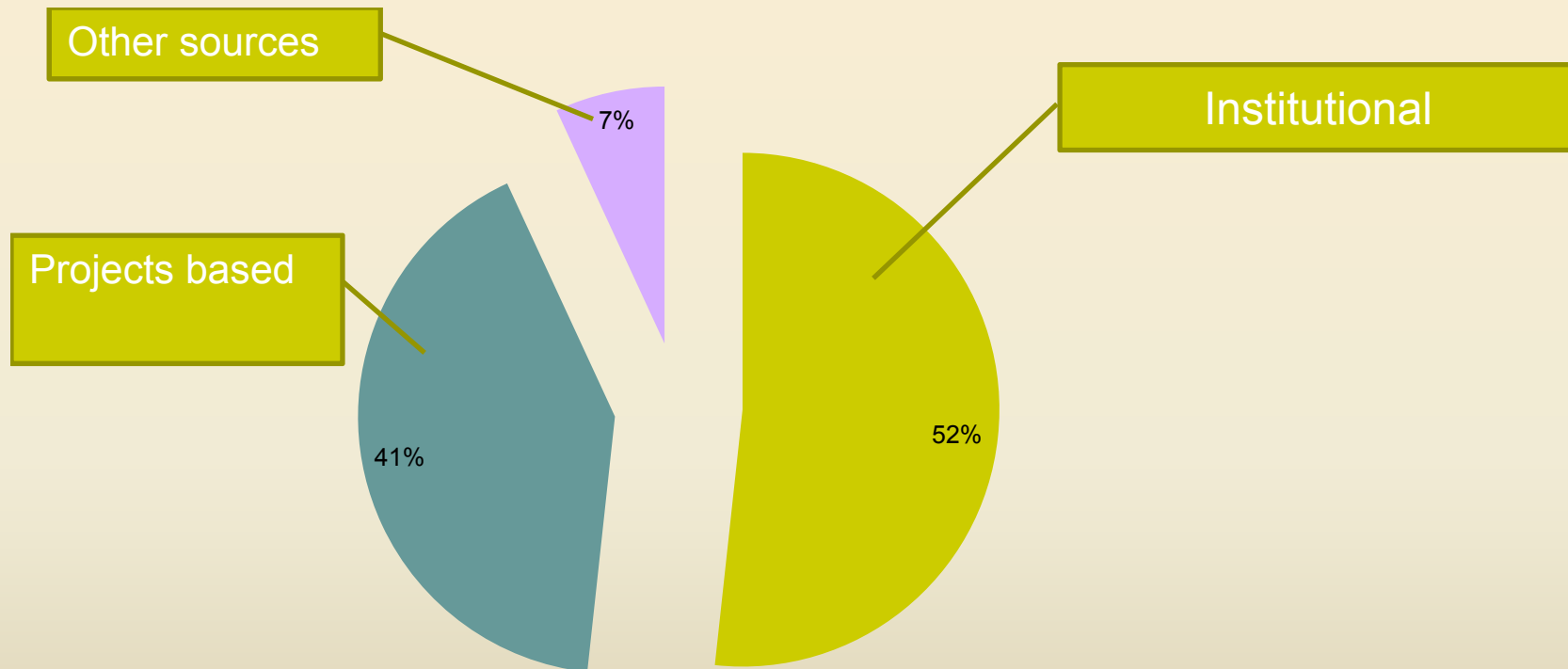


Department of Prehistory



Staff budget

Institutional (hard money) : **Project based** (soft money)



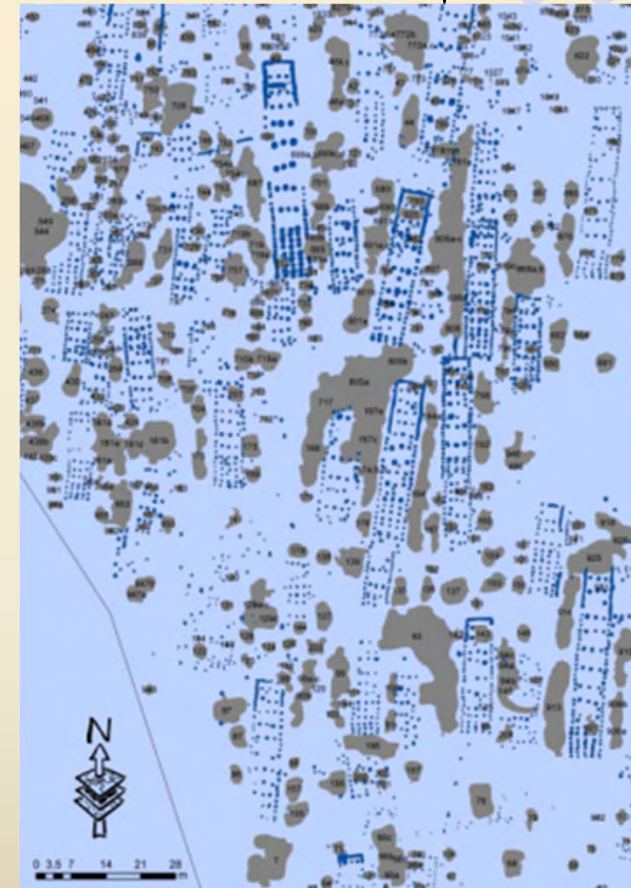
Department of Prehistory: 3 major themes of fundamental research

Three major thematic spheres, delimited chronologically, within which intermediate projects develop:

1. Neolithic,
2. Late Aeneolithic and Bronze Age
3. Turn of prehistory and protohistory

1. Neolithic

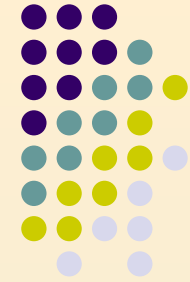
- R. Šumberová (settlement archaeology, Kutná Hora region archaeology),
- H. Brzobohatá (anthropology of archaic populations, digital morphometry),
- I. Pavlů (Neolithic of Europe and origins of agriculture),
- P. Květina (Neolithic settlements, anthropological archaeology),
- M. Končelová (Neolithic settlement strategy),
- J. Řídký (Late Neolithic, rondels, stone industry),
- P. Burgert (Later Neolithic, obsidian in prehistory)
- K. Neumannová (technology of Neolithic pottery).



Bylany site, 7 ha Neolithic settlement with large number of LBK longhouses



Department of Prehistory



2. Late Aeneolithic and Bronze Age

- M. Ernée (historical technologies and Early Bronze Age in central Europe),
- P. Limburský (end Aeneolithic and outset of Early Bronze Age),
- M. Dobeš (European Aeneolithic, copper artefacts),
- L. Jiráň (European Bronze Age, archaeometallurgy of copper and bronze, settlement archaeology),
- J. Unger (cultural change in the Urnfield Period),
- K. Kleinová (Late Bronze Age settlement),
- C. Nicolas (social stratification of Bell Beaker c.



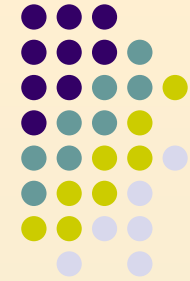
Vlněves site, Early Bronze Age, stone dagger



Mikulovice site, Early Bronze Age, grave no. 2 with amber beads



Department of Prehistory



3. Turn of prehistory and protohistory

- M. Chytráček (Hallstatt and La-Tène Period, settlement archaeology),
- V. Salač (La-Tène Period, early Roman Period, political economy in later prehistory)
- J. Militký (Celtic minting, finds of ancient coins in the barbarian, ancient numismatics).



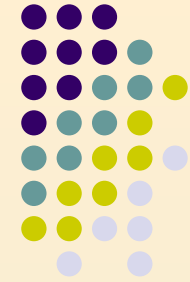
Rovná site, Reconstruction of Hallstatt period grave chamber with two-wheeled chariot and numerous exclusive finds.



Třisov oppidum site, La Tène period, analytical prospection with metal detectors resulted in numerous finds of celtic coins.



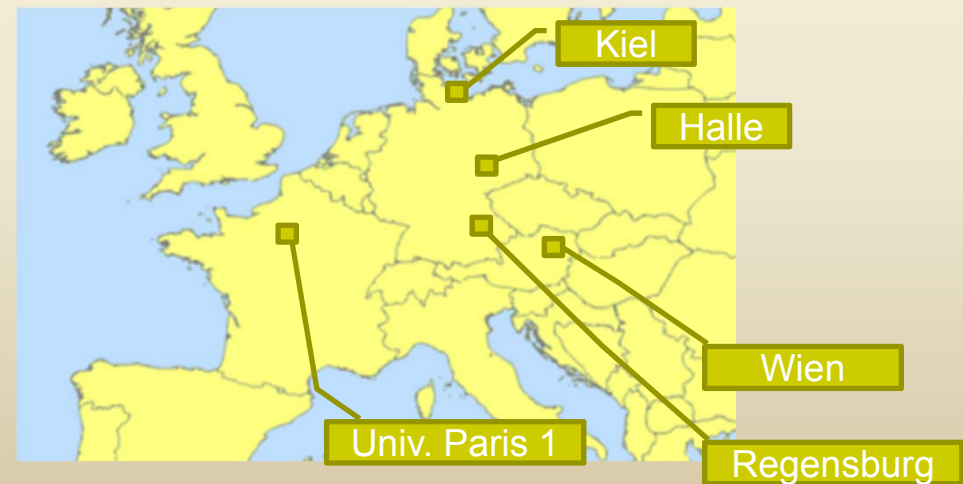
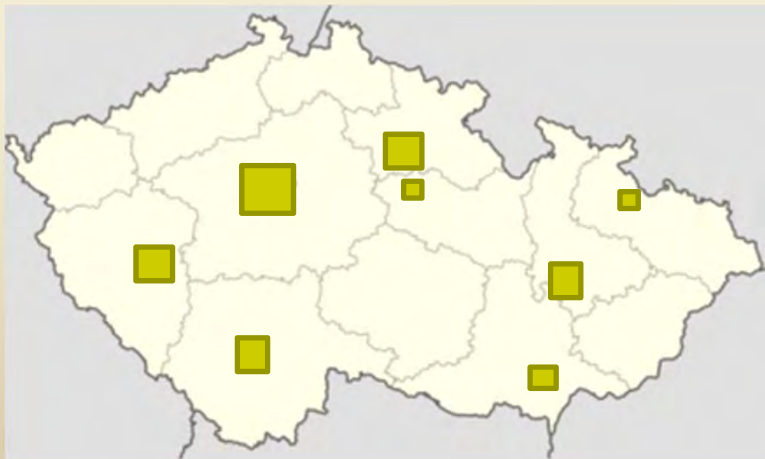
Department of Prehistory: activities parallel to the fundamental research



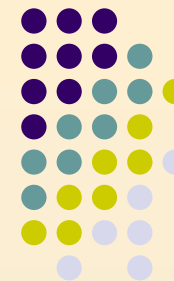
- Educational activities
- Involvement of students in research
- Dissemination of knowledge

Educational activities

- 27 bachelor and master study programmes at Czech universities
- members cooperated also in foreign study programmes of archaeology in Halle (Saale), Regensburg, Kiel, Wien and Paris (Univ. Paris 1).



Department of Prehistory: activities parallel to the fundamental research

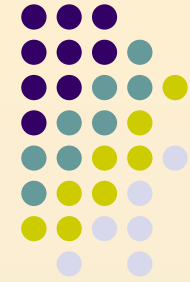


Educational activities

Type of study	No. of supervisors (theses, dissertations)	No. of consultants and co-supervisors	Theses defended in 2010-2014
Bachelor	47	9	50
Master	38	7	32
Doctoral	31	18	13



Department of Prehistory: activities parallel to the fundamental research



Involvement of students in research

Students regularly participated in the activities of the Dep. of Prehistory: **field schools and projects**



Central Turkey, field school, J. Řídký and students documenting mill stones.



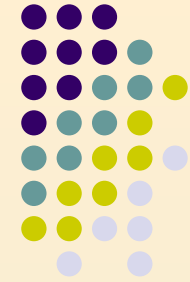
Vlíněves site, field school, P. Limburský and students excavating Aeneolithic burials



Rovná site, field school, M. Chytráček and students excavating the burial mound.

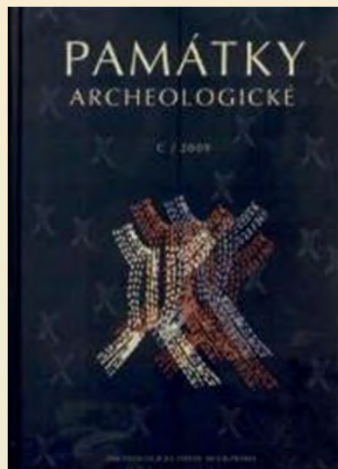


Department of Prehistory: activities parallel to the fundamental research



Dissemination of knowledge

- Editorial of journals and other publication – examples of DOP engagement:



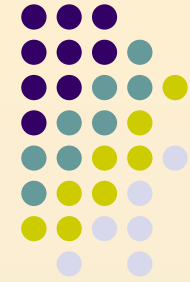
- member of the DOP M. Ernée is the Editor in chief of journal „**Památky archeologické**“.
- The journal *Památky archeologické* is indexed and abstracted in *Arts and Humanities Citation Index® (Web of Science®)* by Thomson Reuters. The journal *Památky archeologické* is also indexed or abstracted in *SCOPUS*, *ERIH PLUS*, *EBSCO* and *Ulrich's Periodicals Directory*.



- **Prehistory of Bohemia. Volumes 1-7**
- members of the DOP cooperating with other departments of the The Institute of Archaeology in Prague.
- 7 volume compendium on the prehistory of Bohemia, which presents the current state of research and includes an overview of sources, questions, and interpretations of data.

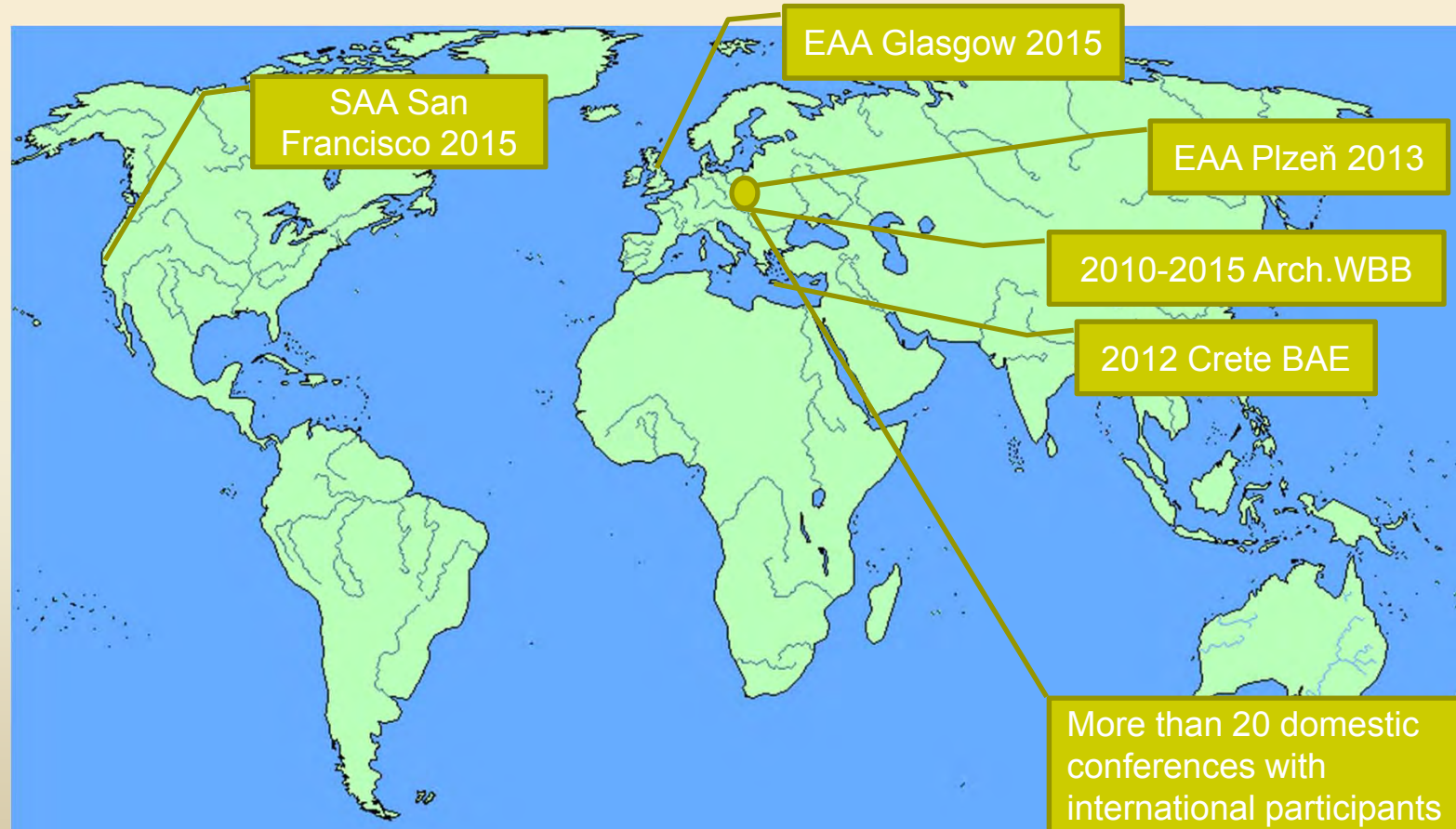


Department of Prehistory: activities parallel to the fundamental research

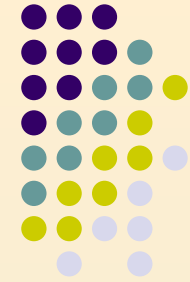


Dissemination of knowledge

- Organizing of international conferences and symposiums,



Department of Prehistory: activities parallel to the fundamental research



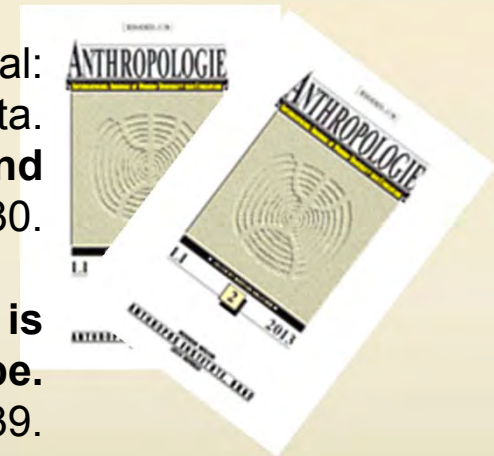
Dissemination of knowledge

- International conference proceedings - examples :

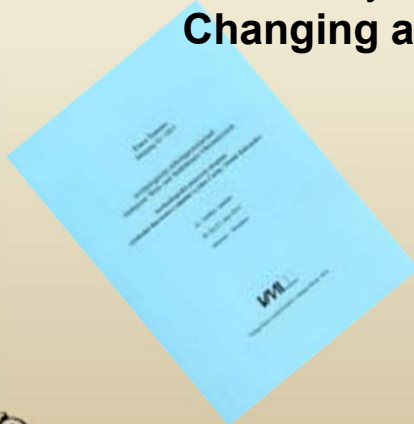


2010 – Charvát, P. – Maříková-Vlčková, P. (eds.): **Who was King? Who was not King? The Rulers and the Ruled in the Ancient Near East.** Prague: Institute of Archaeology of the CAS.

- Two thematic issues of Anthropologie journal:
2013 - Sosna, D., J. Kolář, P. Květina, and F. Trampota. **Prehistoric archaeology in Central Europe: beyond diversity.** *Anthropologie* 51 (2):123-130.



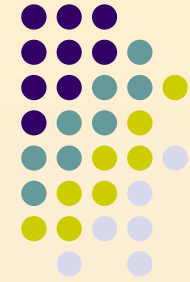
2015 - Řídký, J., P. Květina, H. Stäuble, and I. Pavlů. **What is Changing and When – Post-LBK Life in Central Europe.** *Anthropologie* 53 (3):333-339.



2013 – Chytráček, M. – Gruber, H. – Michálek, Sandner, R. – Schmotz, K. (Hrsg.): **Archäologische Arbeitsgemeinschaft Ostbayern/West- und Südböhmen/Oberösterreich.** Rahden/Westf.: Verlag Marie Leidorf.



Department of Prehistory



Academic Awards

Michal Ernée

2010-2012 Humboldt Research Fellowship for Experienced Researchers
(Martin-Luther University Halle-Wittenberg, prof. Bertemes)

2013-2014 Humboldt Return Fellowship

2014 Humboldt Printing Subsidy

Vladimír Salač

2014 - Reimar Lüst Award of Alexander von Humboldt Foundation



The President of the Alexander von Humboldt Foundation, Professor Dr. Helmuth Schwarz, presented the Reimar Lüst Award to PhDr. Vladimír Salač at a ceremony in Bamberg. March 2014



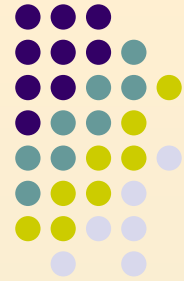
Department of Prehistory

Research plan for the near future

- Research plan for upcoming years will integrally expand the work done in the recent period. The research base structure will not change since the current composition seems effective.
- The trend in theoretical concept will be maintained and will continue to initiate and develop means how to grasp societies “without history” based on the study of systemic culture elements and their interactions.

Grant funds for 2015 and next years

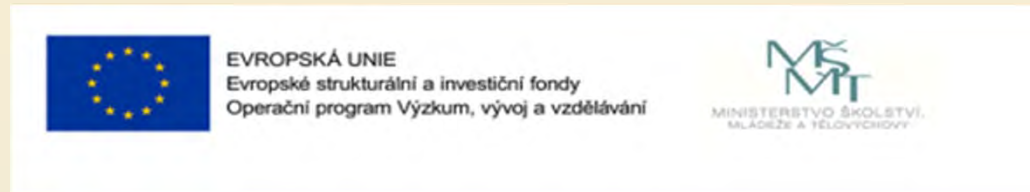
- **Variability of Neolithic pottery technology as a marker of social identity.** GA ČR (Project Id: 14-07062S, 2014-2016). Main holder: Institute of Archaeology CAS (P. Květina), co-recipient: University of Hradec Králové (R. Thér).
- **Individual and Community. An insight into hierarchy of the Early Bronze Age society based on burial ranges.** GA ČR (GA13-24252P, 2013 – 2015). Main holder: Institute of Archaeology CAS (P. Limburský).
- **Archaeological 3D virtual museum. New technologies in documentation and presentation of Neolithic settlement.** Ministry of culture, NAKI programme (DF12P01OVV032, 2012–2015). Main recipient: Institute of Archaeology CAS (P. Květina).
- **Socio-ritual centre in Late Neolithic period (4900-4500 BC)** Foundation endowment Neuron (2015-2017). Main researcher: J. Řídký (DOP)
- **Building Structures, Activity Areas and the Site Layouts of the Late Neolithic Settlement Areas (5000/4900 – 4500/4400 BC).** GA ČR (id. 15-16963S, 2015-2017). Main researcher: J. Řídký (DOP).



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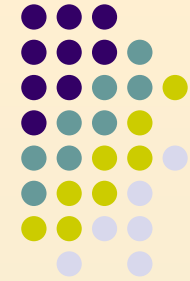
Future strategic projects application

- local programmes (the NAKI II programme of the Ministry of Culture)
- European level (European Research Council, EU Operational programmes).
- Cooperation: internal inside the Institute of Archaeology, external – to attract researchers from outside.



- Future strategic project should implement all 3 major themes of the DoP (Neolithic, Late Aeneolithic and Bronze Age, turn of prehistory and protohistory).
- Aim of the project should resound major social subject of the present world (identity, migration, cultural ecology, technology and people...).
- The project will consist of inter-related „work packages“.
 - social identity and migration in prehistory
 - archaic technologies
 - ...



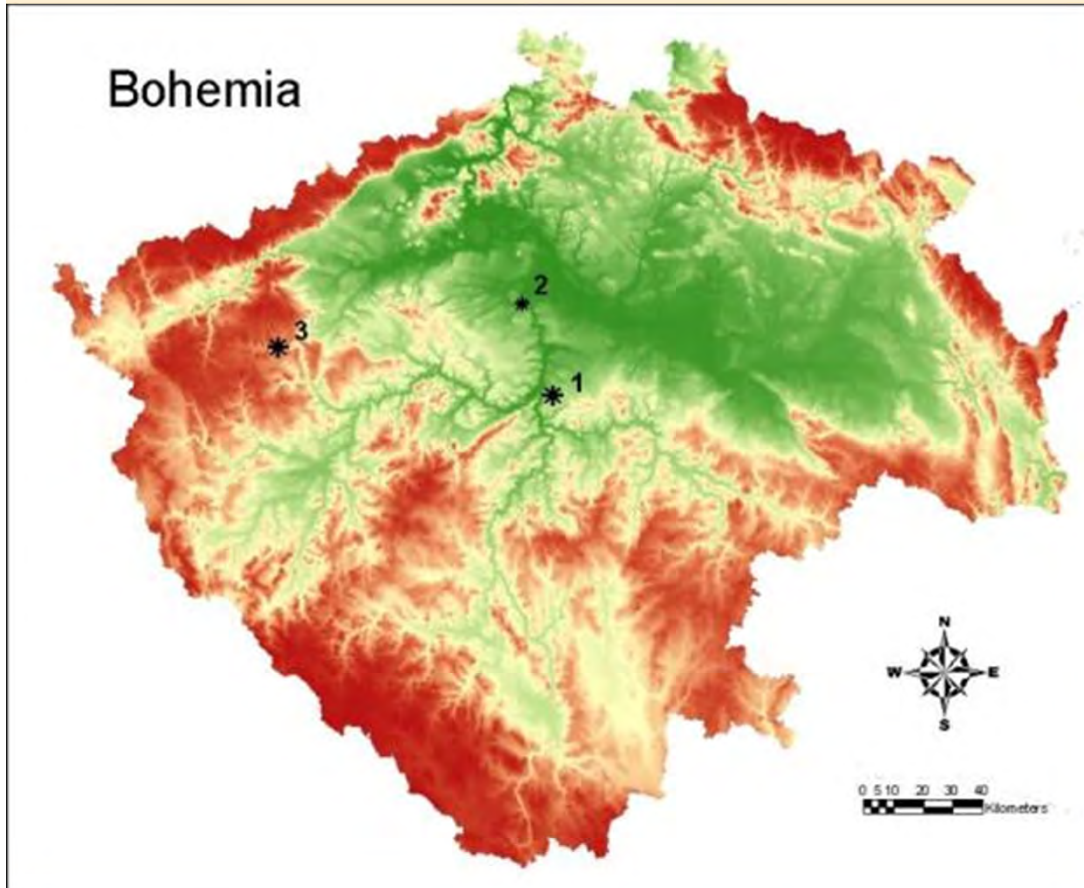


Major research projects 2010 - 2014

- Research of Hallstatt and La-Tène Centers of Power.
- Neolithic rondels. Context, origin, purpose, decline.
- Structure of prehistoric settlement areas. Processing and publication of Aeneolithic finds from the excavation in Vliněves.
- Evaluation and interpretation of finds from the long-term fieldwork research of the Neolithic site at Bylany.
- Czech lands and Central Europe in the Bronze Age.
- Archaeological 3D virtual museum. New technologies in documentation and presentation of Neolithic settlement.



Research of Hallstatt and La-Tène Centres of Power.



1 Závist



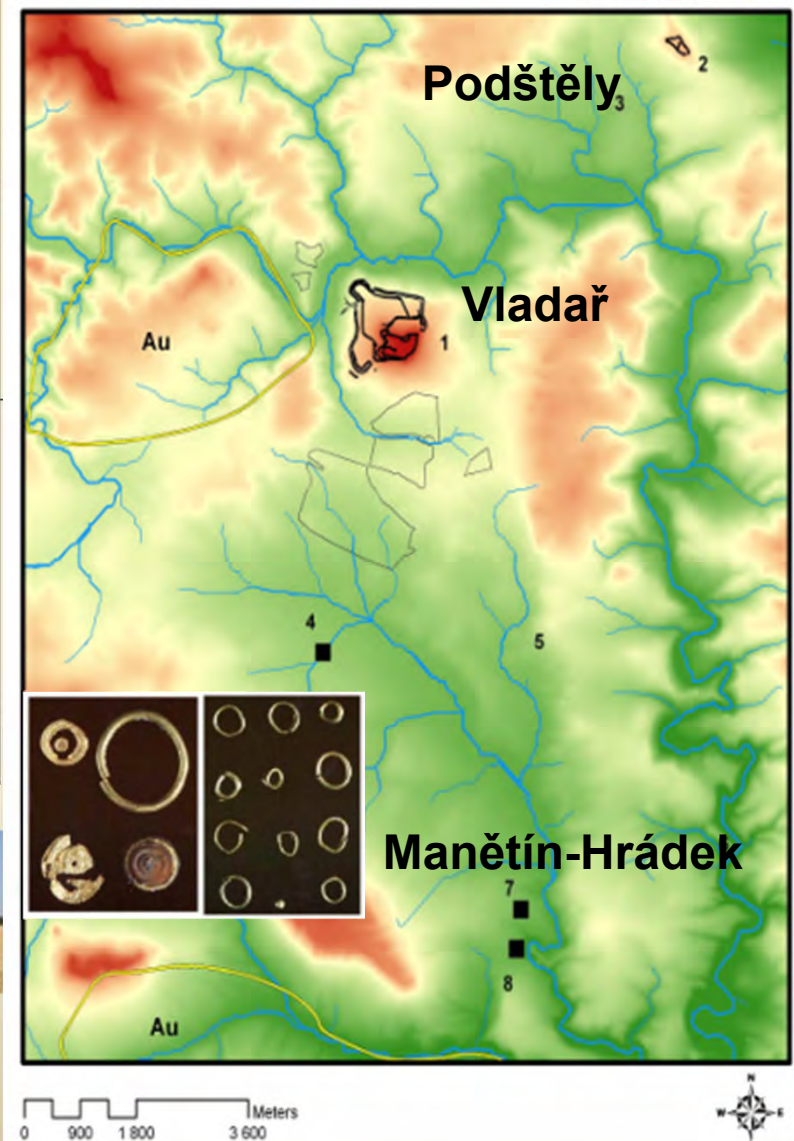
2 Minice



3 Vladař

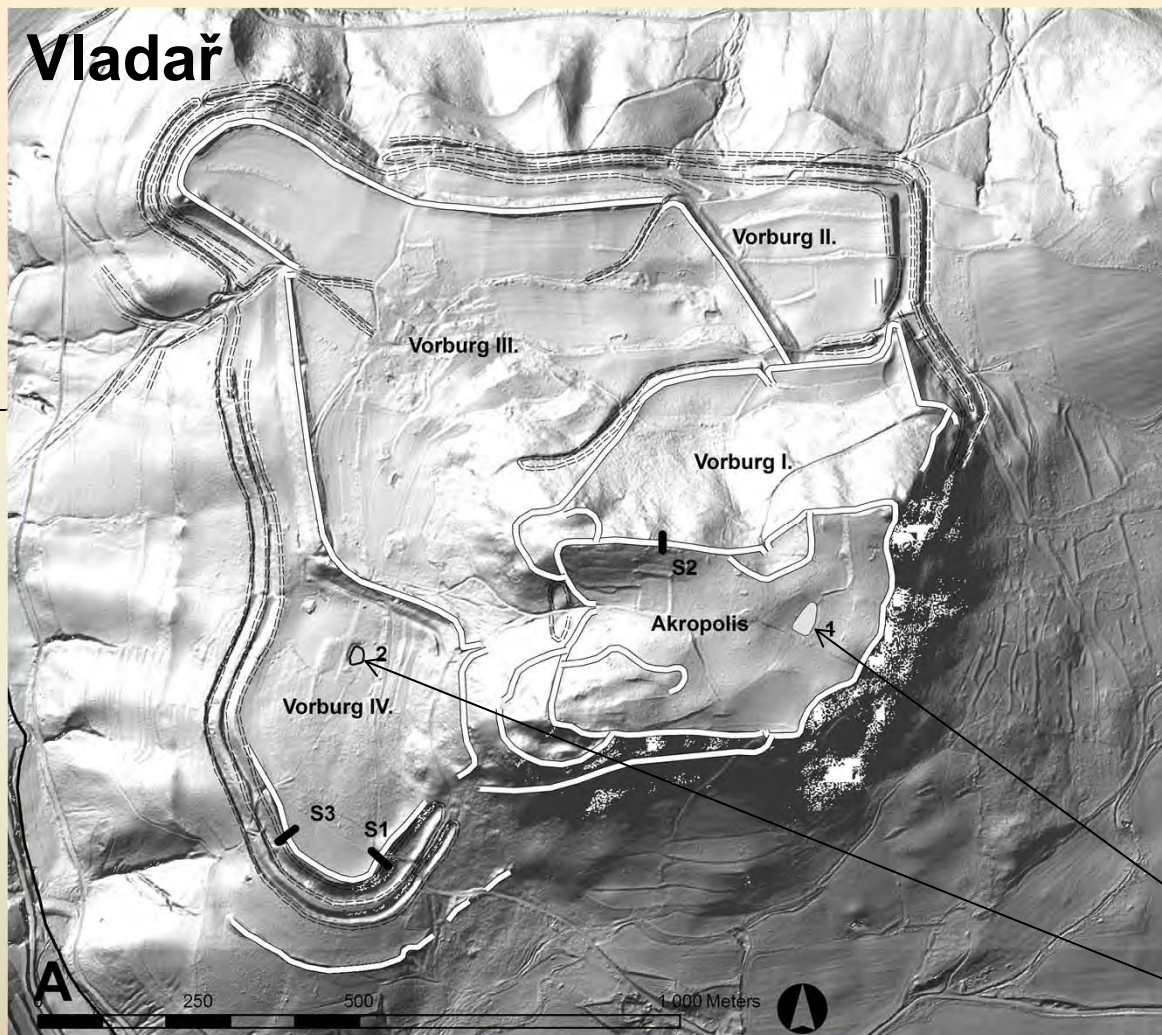
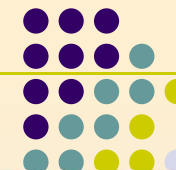


Among the number of Bohemian hillforts known for the 6th and 5th centuries BC, three have been considered as especially important: Závist, Vladař and Minice. The region of the upper Střela in west Bohemia, showing known Iron Age sites (Lode-bearing areas with secondary gold occurrence).



Cemetery at Manětín-Hrádek with fine gold jewellery

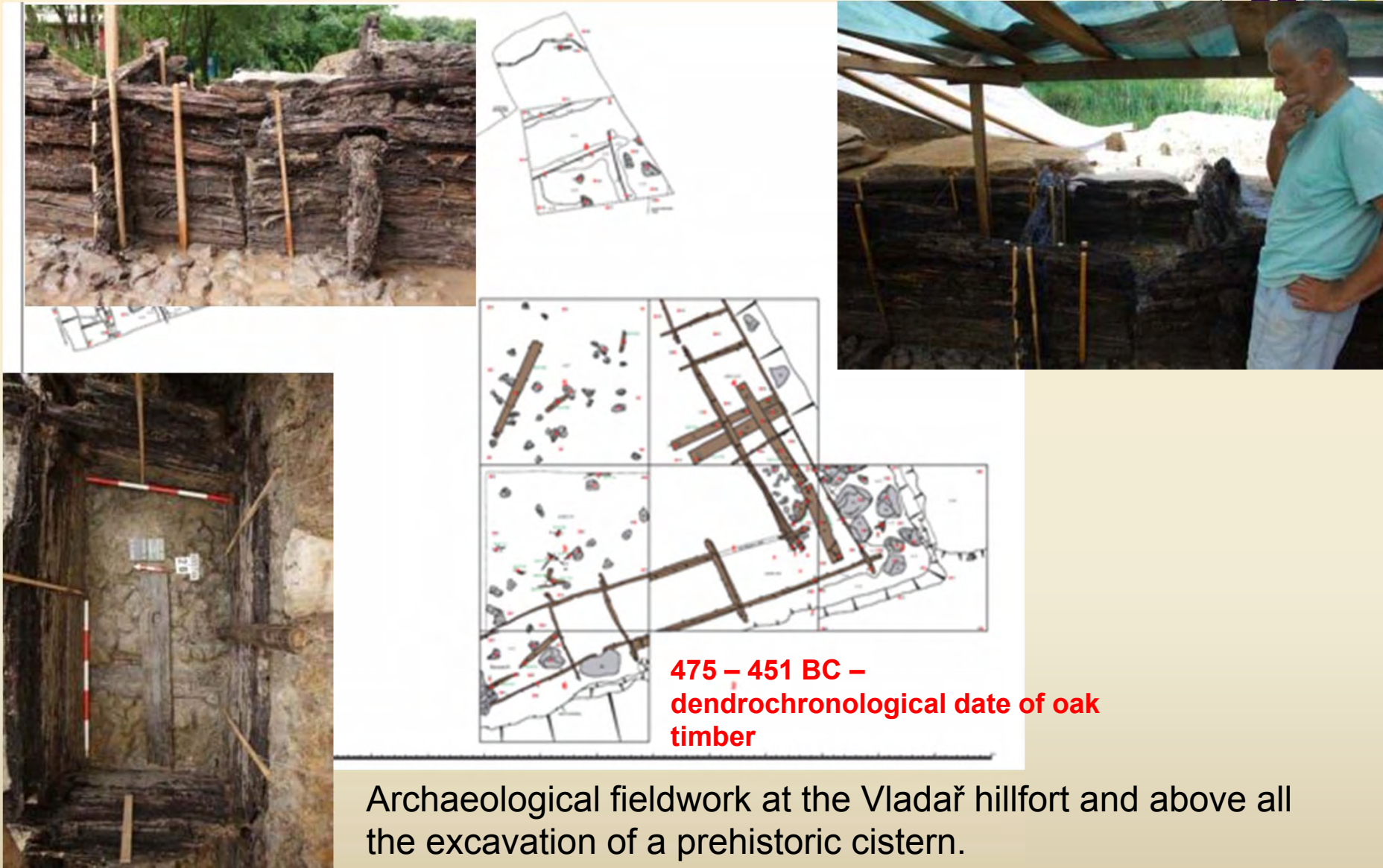
Research of Hallstatt and La-Tène Centres of Power.



Vladař hillfort. Of exceptional importance is the presence of stratified wet situations at the acropolis of the fortified settlement and in the suburb.



Research of Hallstatt and La-Tène Centres of Power.

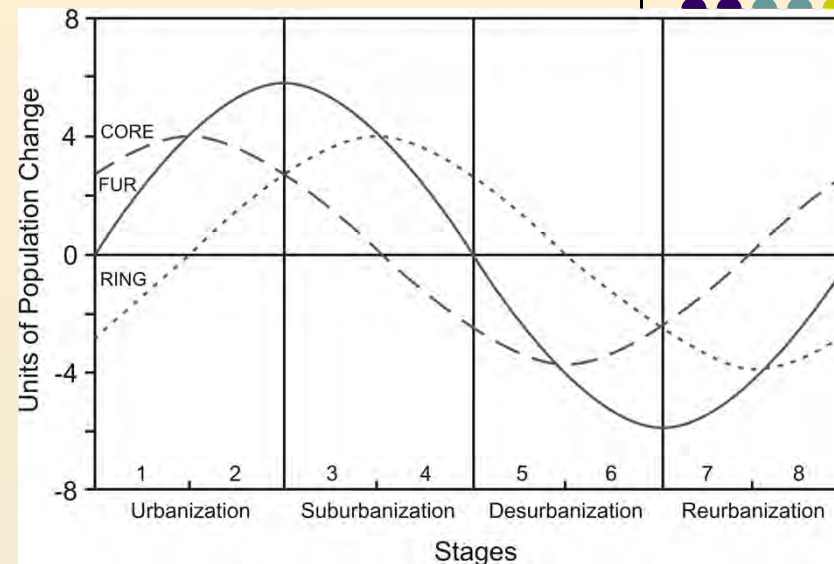
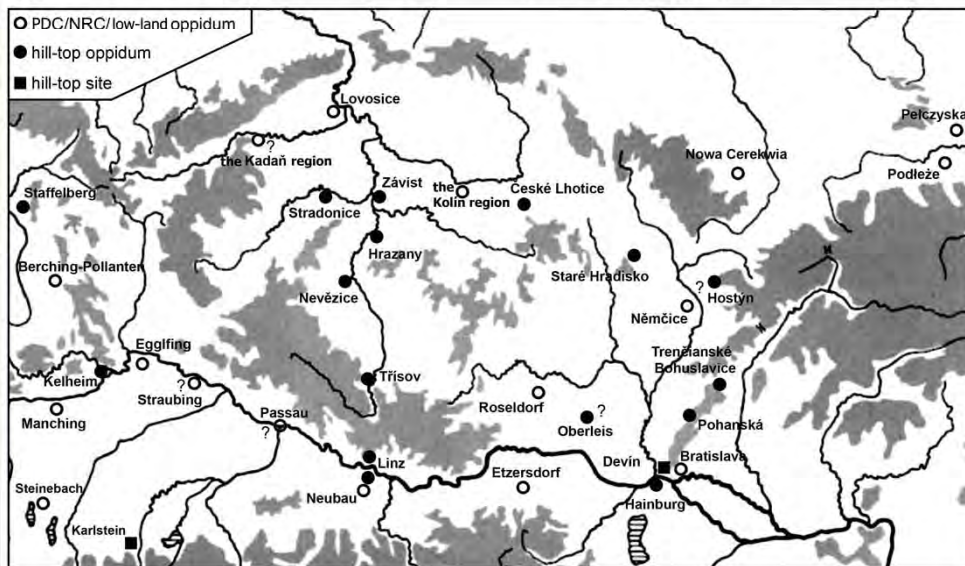
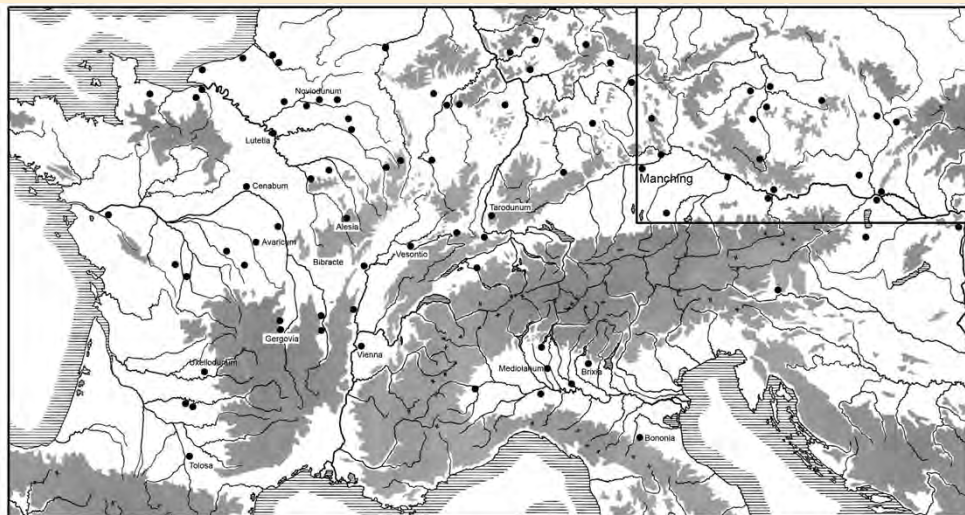


**475 – 451 BC –
dendrochronological date of oak
timber**

Archaeological fieldwork at the Vladař hillfort and above all the excavation of a prehistoric cistern.



Research of Hallstatt and La-Tène Centres of Power.

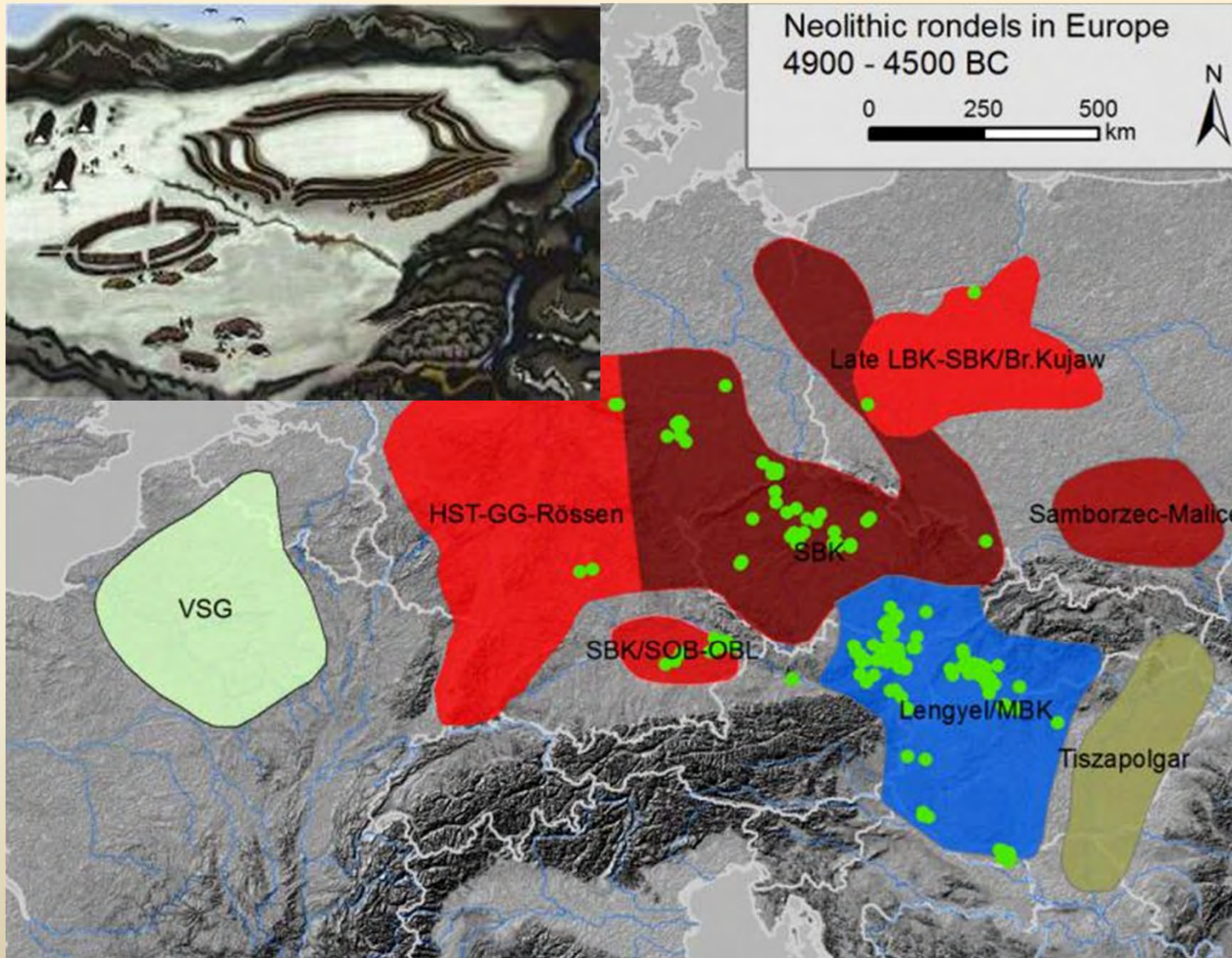
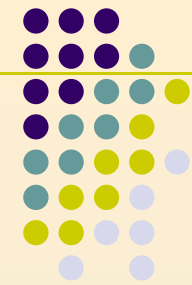


Reconstruction of the evolution of La-Tène settlement structure and hierarchy seen as curve of urbanisation and de-urbanisation (differential urbanism in geography and sociology).

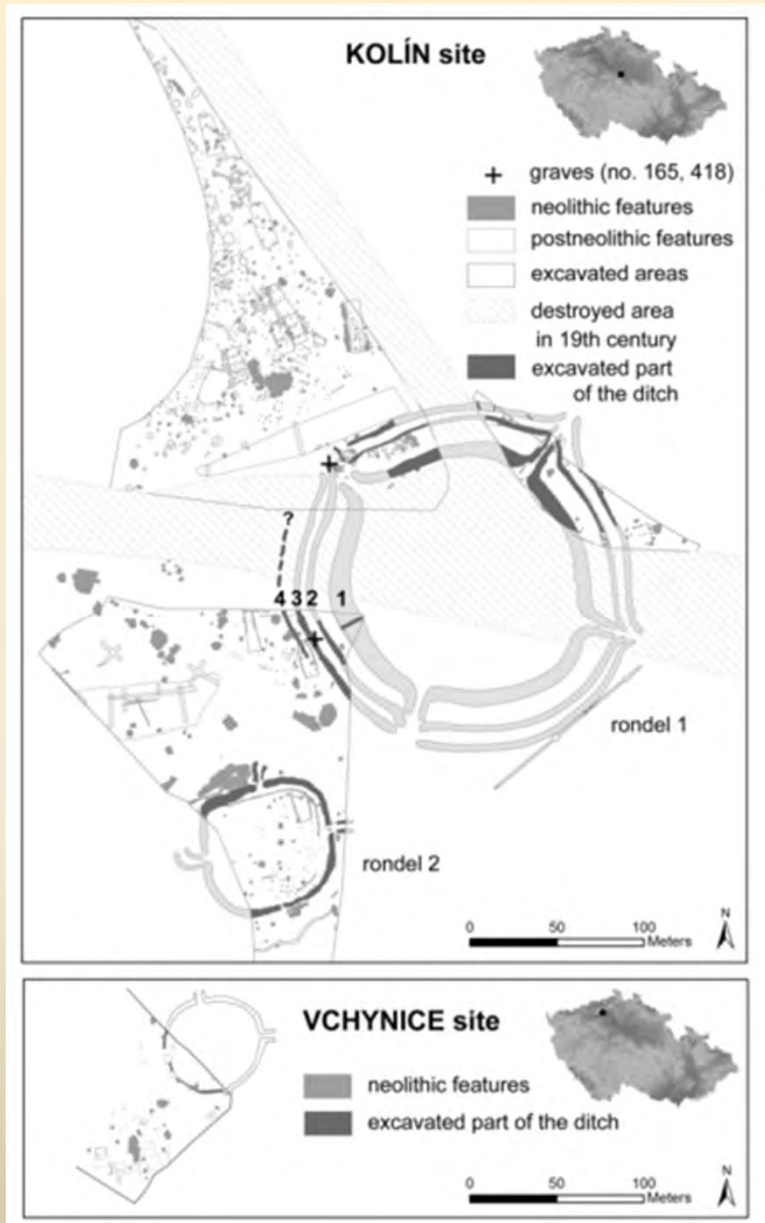
New types of La-Tène central places that precede oppida has been revealed in the last decades. These sites has been defined as Production and Distribution Centers.



Neolithic rondels. Context, origin, purpose, decline.



Neolithic rondels. Context, origin, purpose, decline.

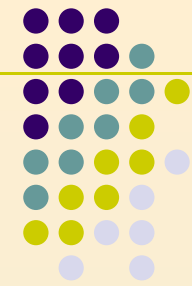


Rondel Kolín 1

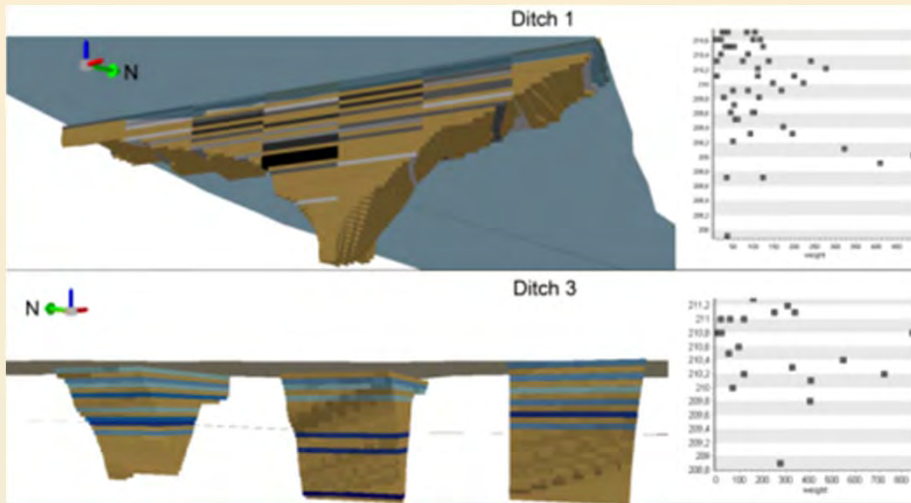
- Ø 213 m
- 4 ditches
- no palisade grooves
- 4 entrances (?)
- dating: Late SBK (IV-V)



Neolithic rondels. Context, origin, purpose, decline.



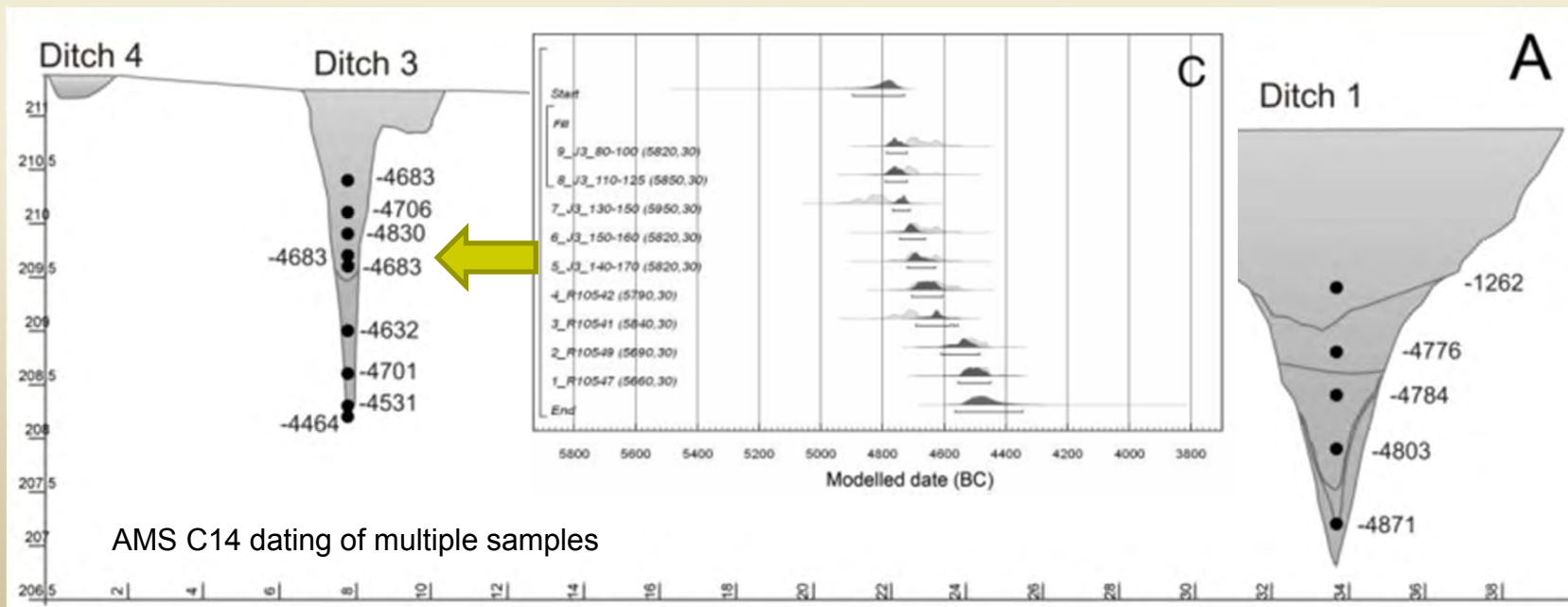
Project: How the ditches of rondels was filled in?



The weight of pottery fragments from ditches 1 and 3, Kolín.

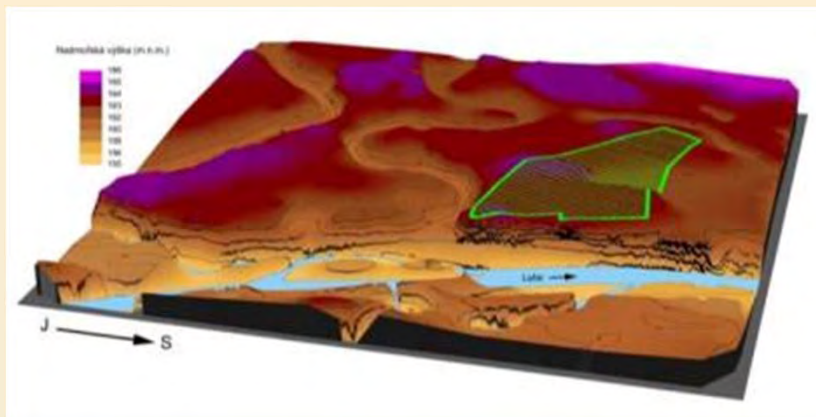
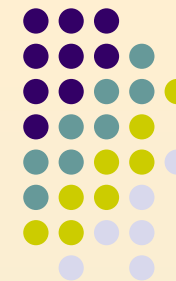


Application of methods of soil micromorphology

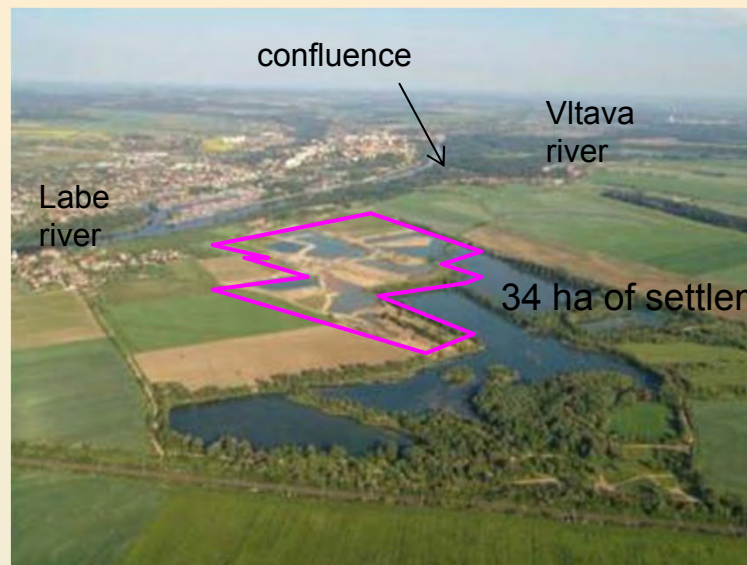


AMS C14 dating of multiple samples

Structure of prehistoric settlement areas. Processing and publication of Aeneolithic finds from the excavation in Vliněves.



Long-term excavation at the sand quarry in Vliněves site, distr. Mělník.



34 ha of settlement



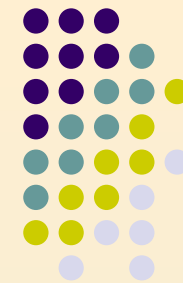
Řivnáč culture hut



Spread of the Āivnáč culture features



Structure of prehistoric settlement areas. Processing and publication of Aeneolithic finds from the excavation in Vliněves.



Graves of the **Corded ware culture**

Dating: ^{14}C = 2 895-2 546 BC
cal 2 Σ (CRL-9194)

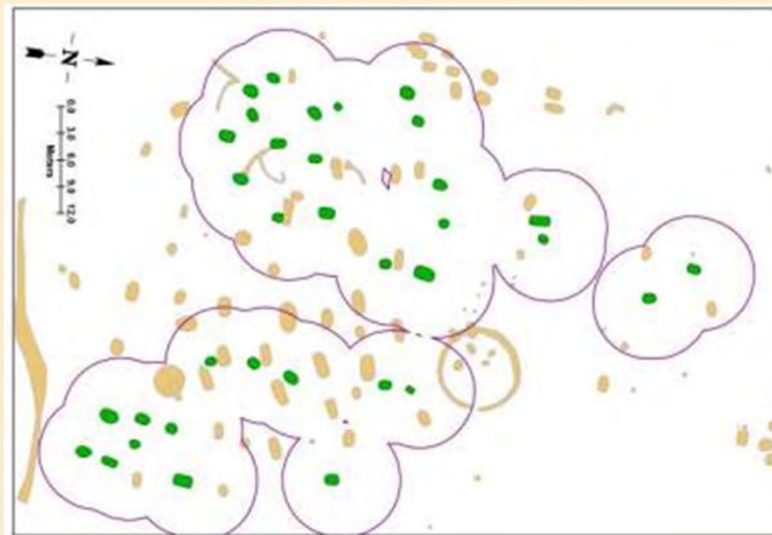
Spread of the
Corded ware
culture



Structure of prehistoric settlement areas. Processing and publication of Aeneolithic finds from the excavation in Vliněves.



Cemetery of the **Bell Beaker culture** (Late Aeneolithic)



Pottery of the Bell Beaker culture

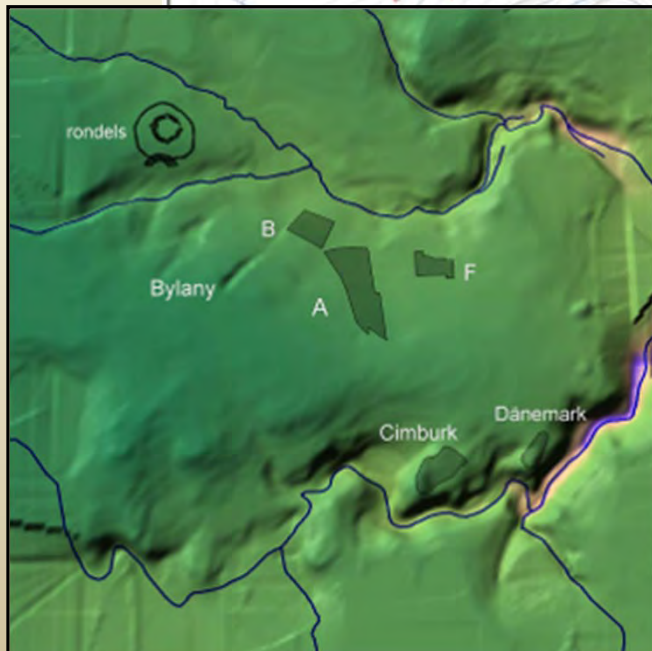
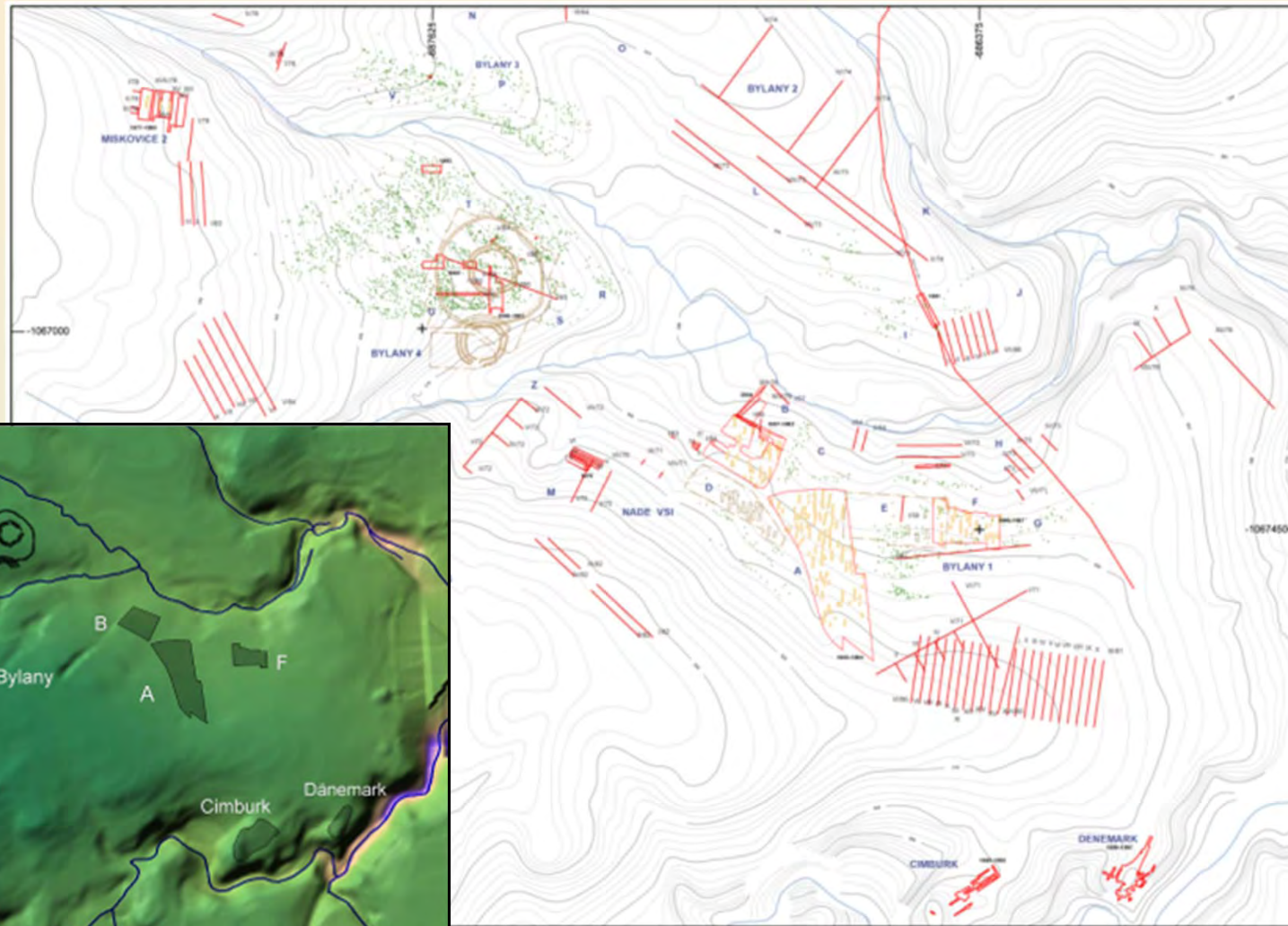


Graves of the **Únětice culture** (EBA)

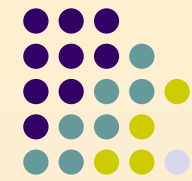


Evaluation and interpretation of finds from the long-term fieldwork research of the Neolithic site at Bylany.

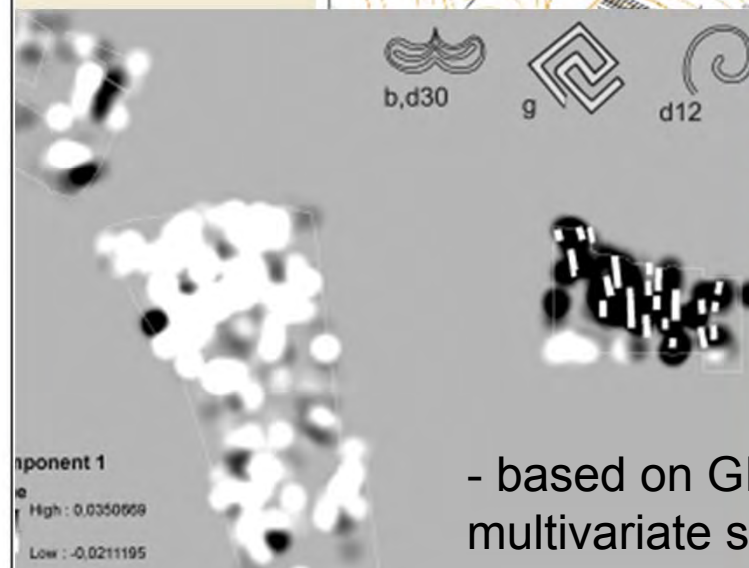
The long-term archaeological research. The excavations brought huge amount of archaeological data (for example: 2000 archaeological features and 76 000 pieces of pottery fragments were documented).



Evaluation and interpretation of finds from the long-term fieldwork research of the Neolithic site at Bylany.



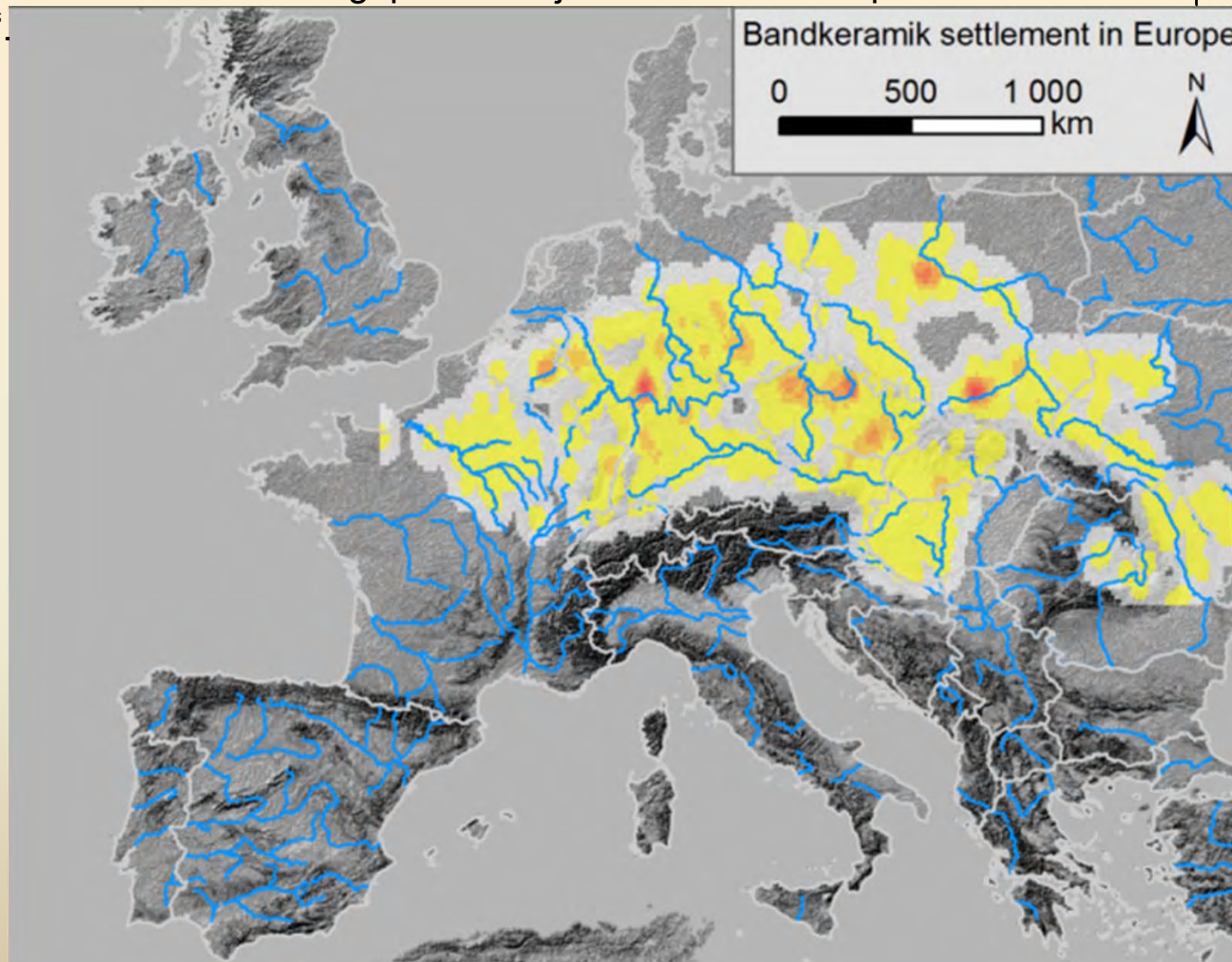
- multiple levels of settlement analyses



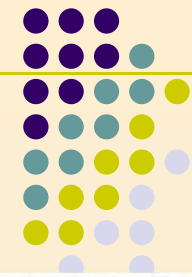
- based on GIS and multivariate statistics

Evaluation and interpretation of finds from the long-term fieldwork research of the Neolithic site at Bylany.

- Part of the European project managed from France „Un observatoire rétrospectif d'une société archéologique: La trajectoire du néolithique Rubané (OBRESOC)“.

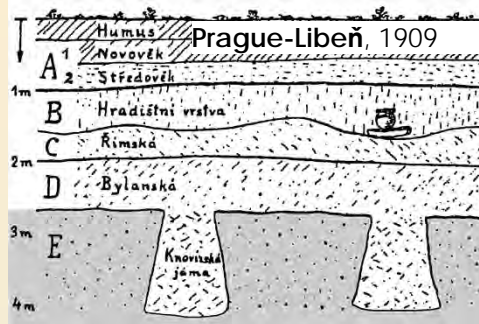


Czech lands and Central Europe in the Bronze Age.

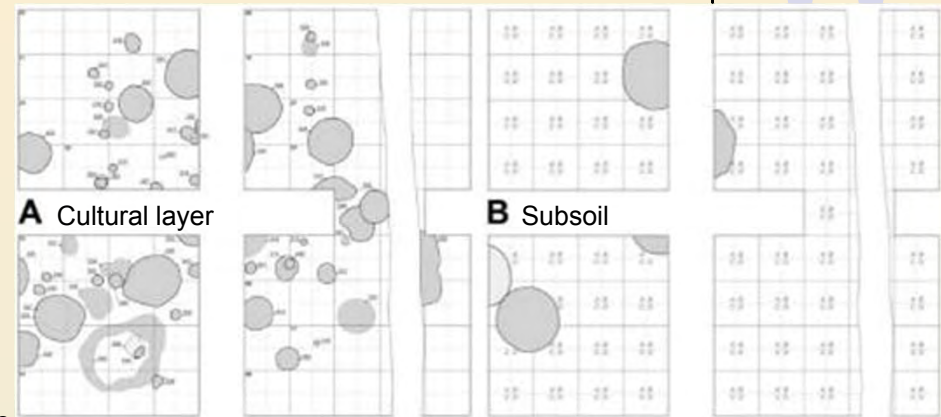


The Settlement Layers on Lowland Settlements.

The project based on analyses of the Late and Final Bronze Age multi-layered settlement structure excavated in Prague-Záběhlice and its interpretation in the European context.



The Settlement Layers were found and documented since 19. century, but a long time **undervaluated** at the expense of graves or settlement „pits“.



Prague-Záběhlice, 2000

on 65 m² in total **59** sunken features of three Late and Final Bronze Age settlement horizons were found and documented (A), but only the deepest parts of the **five** largest pits (B) of one of these settlement horizons sunken in subsoil.

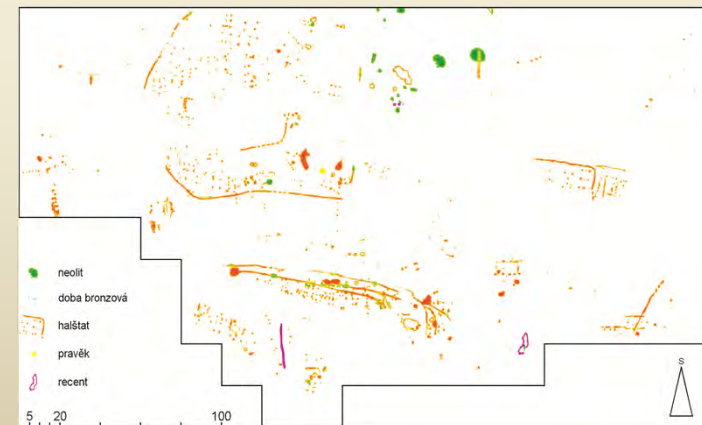
By ignoring the settlement layer and the features they are not sunken in the subsoil, more than 98 % of all prehistoric finds, two of three settlement horizons completely and all informations of them were lost.



Prague-Záběhlice, excavated 2000

Many information horizons identified only in the settlement layer and lost by ignoring them were identified and analysed in context of other sites with preserved and excavated settlement layer.

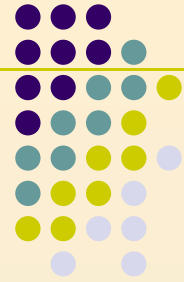
Prague-Hostivař excavated 2004–2006



Sunken features and their structures identified in the settlement layer

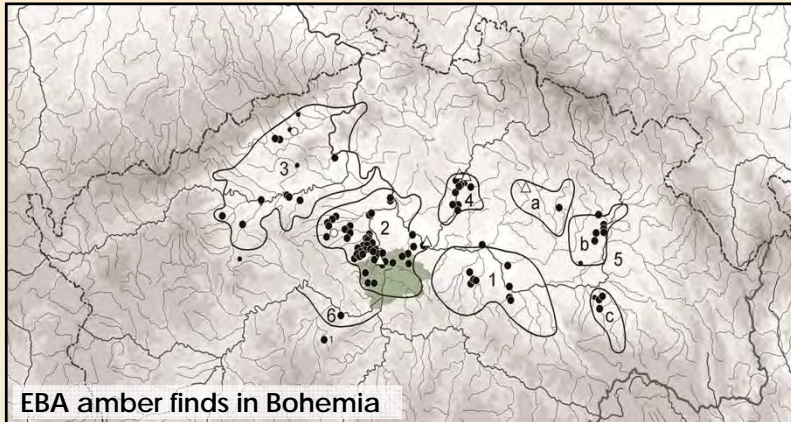


Czech lands and Central Europe in the Bronze Age.



EBA amber in central Europe and the beginning of the Amber Road.

The project based on the current stand of knowledge about the EBA Amber finds in Bohemia and their analyses and interpretation in context of the central European EBA.



EBA amber finds in Bohemia



Prague-Miskovice, Grave 19



Mikulovice, Grave 2

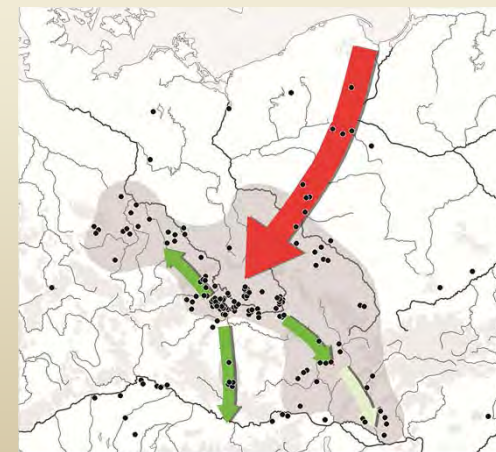
Approximately **4000 amber items** from the Bohemian EBA Únětice Culture are known from a total of **107 sites**, e.g. **87 cemeteries (304 graves)**. Analyses have confirmed the Baltic origin of the amber. We date nearly all of the finds to the classical Únětice Culture (ca. 2050/2000–1800/1750 B. C.). Bohemia is far richer in amber than all of the surrounding regions and was the main target area for trade with amber in the broader central European region. **54 %** of all sites with amber and **82 %** of all amber from graves are in Bohemia. If we can speak at all about an Amber Road for this period, it leads from the Lower Vistula region to Bohemia. Amber was then distributed to further regions (Moravia, central Germany etc.).



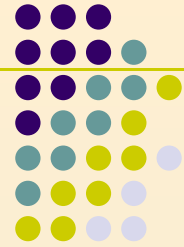
Mikulovice
Amber spacers
from graves
2 and 36

Kozi Hřibety

Bronze dagger
With hollow
grip, **amber
rivets**, golden
Pads and
**Amber inlay
of the pommel**

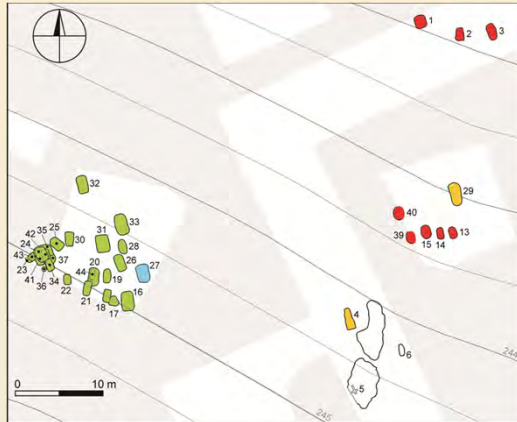


Czech lands and Central Europe in the Bronze Age.



Early Bronze Age cemetery in Prague-Miškovice.

The international project based on the complex multidisciplinary analyses of the EBA cemetery excavated in 1999 and 2001.

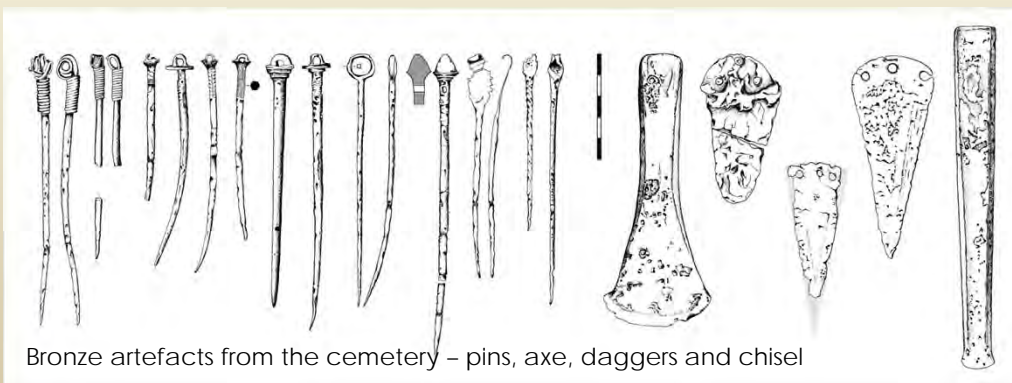


In Prague-Miškovice, a cemetery of the Únětice culture (UC) with a total of 44 graves was excavated. The ¹⁴C dates range from the proto-Únětice phase (red, orange) to the “post-classical” phase (blue) of the UC. The high point of the mortuary activities occurred between 2000 and 1750 BC (classical UC, green).



Many bioarchaeological and archaeometrical method were used by analysing the finds and skeletons, e.g. AMS ¹⁴C-dating incl. bayesian modelling, anthropology, palaeopathology, strontium and oxygen isotope, DNA-analyses, metall-analyses, lead-isotopy, soil phosphat analyses and many others.

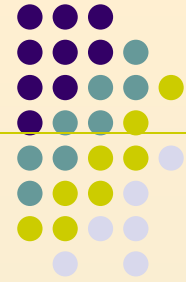
Used archaeometallurgical and archaeological studies of the finds (chisel, axe, dagger blades, pins, rich amber ornaments, sea shells, etc.) reflect cultural relationships ranging from the Baltic to the Alpine region. It is to be assumed that the people of Central Bohemia during the classical UC, due to their excellent geographic location in regard to traffic routes, profited from trade in metals and amber.



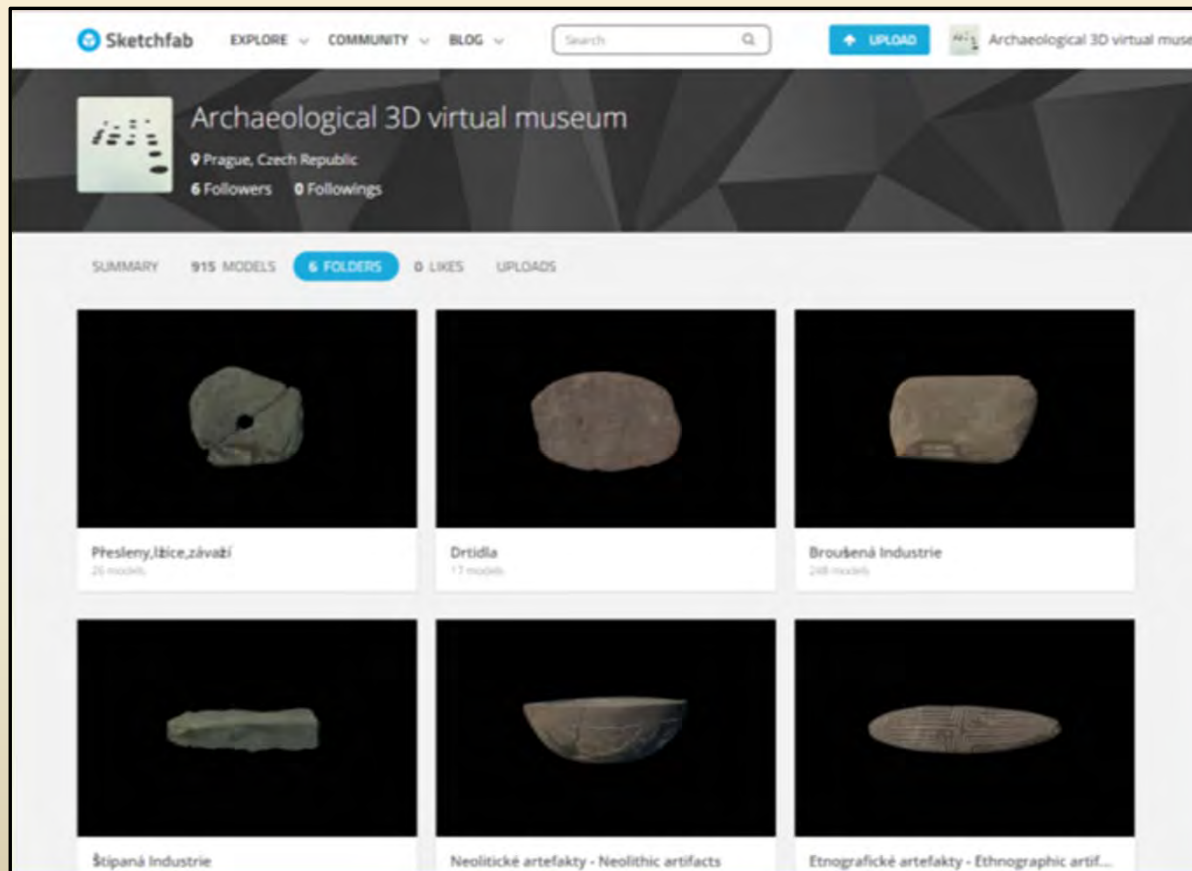
Bronze artefacts from the cemetery – pins, axe, daggers and chisel



Archaeological 3D virtual museum. New technologies in documentation and presentation of Neolithic settlement



- The aim of the project is to apply divergent computer based technologies to create a virtual museum providing a picture of the Neolithic culture.
- One of the main used technological approach is 3D optical scanning



3D scan without texture



3D scan with texture

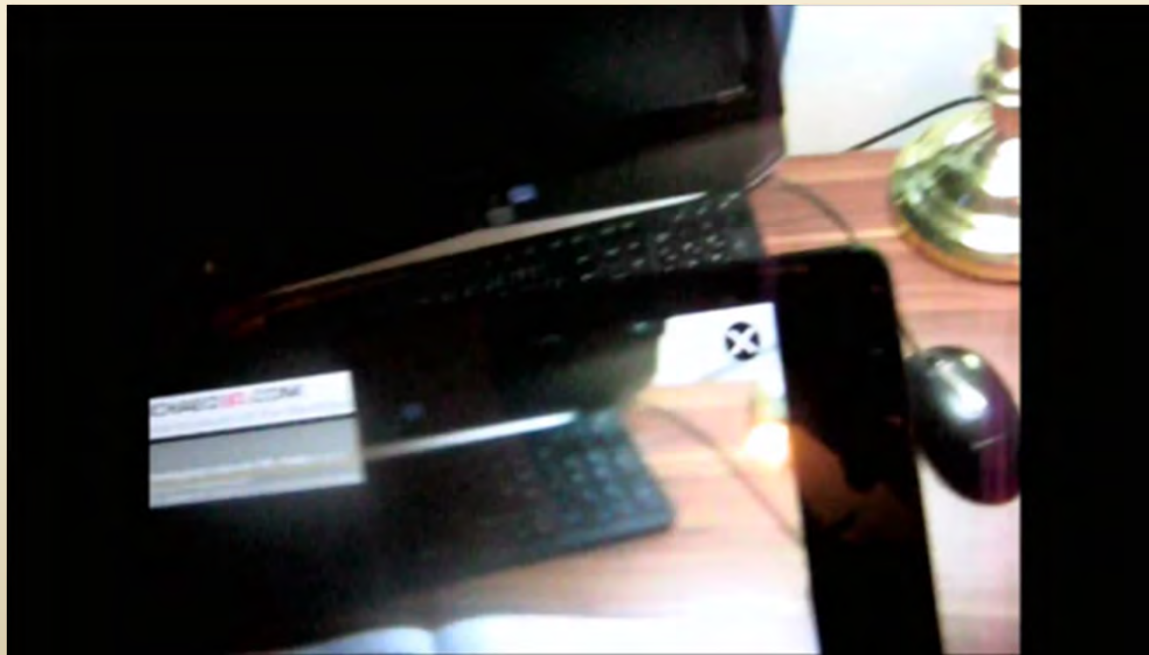
Virtual exhibition of more than 800 artefacts in 3D



Archaeological 3D virtual museum. New technologies in documentation and presentation of Neolithic settlement



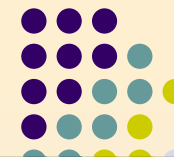
As another output for the presentation of artefacts we chose an application from the Android operating system for mobile devices that utilises the principle of **augmented reality**. This designation is used when the depiction of reality is augmented by the inclusion of digital elements. For this application we used a system with a marker, which is a specific picture with which the application is familiar.



Visualisation via augmented reality



Archaeological 3D virtual museum. New technologies in documentation and presentation of Neolithic settlement



NAKLDF12P010VV032

WWW.ARCHAEO3D.COM
virtual museum of the Neolithic



Virtual reconstruction of archaeological structures



Institute of Archaeology of the CAS, Prague, v. v. i. - EVALUATION 2015 - Department of Prehistory



Thank you

