EVALUATION 2010-2014

DEPARTMENT OF PREHISTORY

Prague – 20th October 2015
The Department of Prehistory focuses in detail on the prehistoric period only: the Neolithic and later periods. This so-called "non-written past" means that the department's members are able to engage in theoretical and fieldwork research of the earliest human culture.

Aim of the Department of Prehistory:

- Neolithic
- Aeneolithic
- Bronze Age
- Hallstatt
- La Tène
- Roman periods and Migration periods
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
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)

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

29 staffers of DoP
+ 3 retired
Staff budget

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

- **Institutional**: 52%
- **Projects based**: 41%
- **Other sources**: 7%
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
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.)

Vlíněves site, Early Bronze Age, stone dagger

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

**Třísov 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).
**Educational activities**

<table>
<thead>
<tr>
<th>Type of study</th>
<th>No. of supervisors (theses, dissertations)</th>
<th>No. of consultants and co-supervisors</th>
<th>Theses defended in 2010-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor</td>
<td>47</td>
<td>9</td>
<td>50</td>
</tr>
<tr>
<td>Master</td>
<td>38</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>Doctoral</td>
<td>31</td>
<td>18</td>
<td>13</td>
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</tbody>
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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 millstones.
- **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,
  - SAA San Francisco 2015
  - EAA Glasgow 2015
  - EAA Plzeň 2013
  - 2010-2015 Arch.WBB
  - 2012 Crete BAE
  - More than 20 domestic conferences with international participants
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:


Academic Awards

**Michal Ernée**
2010-2012 Humboldt Research Fellowship for Experienced Researchers (Martin-Luther University Halle-Wittenberg, prof. Berthes)

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. Vladimir Salač at a ceremony in Bamberg. March 2014
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

• Socio-ritual centre in Late Neolithic period (4900-4500 BC) Foundation endowment Neuron (2015-2017). Main researcher: J. Řídký (DOP)
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.
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.
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.

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

475 – 451 BC –
dendrochronological date of oak timber
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.

Řivnáč culture hut

Spread of the Řivnáč culture features
Graves of the **Corded ware culture**

Dating: $^{14}C = 2\ 895-2\ 546\ BC$

$\text{cal}\ 2\ \Sigma\ (\text{CRL-9194})$

Spread of the **Corded ware culture**
Structure of prehistoric settlement areas. Processing and publication of Aeneolithic finds from the excavation in Vlněves.

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)“.
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.

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.
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.

Approximately 4000 amber items from the Bohemian EBA Unetice 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 Unetice 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.).
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 isotopy, 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.
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.

Virtual exhibition of more than 800 artefacts in 3D

3D scan without texture

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

Virtual reconstruction of archaeological structures

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