# PRINCIPLES AND PROCEDURES OF THE ARCHAEOLOGICAL EXPLORATION OF CHARCOAL PLATFORMS

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https://doi.org/10.11118/978-80-7509-831-3-0243

**Abstract**
Charcoal platforms are landforms that refer to the historical burning of charcoal in the charcoal kilns. Nowadays, it is possible to encounter these objects especially in forested environments, where they can be damaged not only by natural influences, but also by human activity and forest management. An archaeological field prospection was carried out in three selected areas of the Drahany Highlands (Czech Republic), which aimed to identify and document the relics of production platforms in the field and subsequently carry out archaeological field excavation of six selected objects. The aim of this paper is primarily to describe the archaeological principles and procedures of the actual excavation of the charcoal platforms. Not only the main methodological steps of excavation and documentation will be presented, but also the complete legislative framework of archaeological management. Emphasis is also placed on the issue of determining the cultural and historical value of chracoal platforms, their place in the issue of monument protection and nature and landscape protection as such.

**Key words:** forest, nature conservation, cultural heritage, archaeological excavation

## Introduction

Over the last few years, Czech archaeology has made tremendous progress in relation to charcoal pile research. Objects that used to be on the periphery of mainstream research, and were of interest mainly to archaeologists focused on experimental and post-medieval archaeology, have now become representative representatives of human economic activity in forests. The growing interest can be attributed to the increasing number of research projects aimed at identifying previously unknown or neglected archaeological sites in forests that are intensively threatened by logging operations as a result of the extensive current bark beetle calamity. Charcoal platforms are defined as relics of charcoal piles that were used to produce charcoal in the past. In the terrain, they appear as circular or oval-shaped platforms buried in the hillside or laid in flat terrain. The identification of a platform on the plain is greatly facilitated if it is surrounded by a continuous mound of charcoal, clay, moure or other surface remains of the charcoal piles. Platforms vary in size and can range from 5 to 15 m in diameter (obr. 1; Bobek a kol. 2021).

Fig. 1: Relic of the charcoal platform

Between 2020 and 2022, 117 objects were discovered in the area of interest with a total area of 15 $km^2$ and interpreted as charcoal platforms. After the identification and documentation of the captured relics, the excavation of six selected representatives of these evidence of human economic activity in forests was proceeded. The main objectives of the paper are: 1) To present the main methodological steps of conducting archaeological research on charcoal platforms and its setting in the legislative

framework. 2) To emphasize the heritage value of charcoal platforms with regard to nature conservation and cultural landscape.

**Material and methods**

Archaeological research can be defined as a systematic set of specialized professional activities ensuring the rescue, preservation and documentation of archaeological findings. The methodology of field archaeological charcoal platforms excavation consists of the practical principles and procedures for conducting archaeological excavations within the framework of general archaeological method and theory (Neustupný 1993). The aim of archaeological excavation is to obtain the most comprehensive information and documentation in the form of, most often, a complete excavation in the case of rescue archaeological research initiated by contemporary construction or other activities that threaten and destroy archaeological objects and finds. On the other hand, research conducted in an area with archaeological findings not otherwise threatened by archaeological finds is triggered by the need for archaeology as a scientific discipline, is determined by a defined research purpose and, on the contrary, must be conducted in such a way as not to unnecessarily damage the object under investigation. Preference is given to non-destructive and low-destructive methods in research, and only when necessary for the stated research objective is destructive research of limited scope chosen without unnecessarily disturbing the preserved relics. Archaeological research consists of a pre-excavation part (e.g. research, selection of probe location, visual survey), the actual excavation (probing, surface excavation) and a post-excavation part (digitization of field documentation, laboratory treatment of findings, their conservation, registration and preparation of a finding report). The method of conducting archaeological research depends on the nature of the site and the type of destructive research method chosen, but it is always true that fieldwork is irreversible and non-reproducible in its effect, because archaeological sources are inherently inexhaustible and non-renewable. The working procedure, the technique of excavation and the documentation taken must therefore be carried out as carefully as possible. It is important to monitor their interrelationships and relationships to the archaeological site. The means to record the so-called find circumstances is to make the documentation and description as objective as possible (Harris 1989). The products of destructive research are immovable artefacts (e.g. pits, ovens, walls), movable artefacts (ceramics, metal etc.), samples of ecofacts and natural objects, documentation of finds and their relationships, and records of finds. The final product of the field research is the report of the archaeological research (according to Act No. 20/1987 Coll.) and the publication of the research results (Neustupný 2007; Bureš 2014).

According to the current legislation of the Czech Republic, the so-called Act on the national heritage care (No. 20/1987 Coll.), archaeological research can only be carried out by the Archaeological Institute of the Academy of Sciences of the Czech Republic and so-called authorized organizations, i.e. organizations that have been granted a valid permit by the Ministry of Culture of the Czech Republic to carry out archaeological research and at the same time these authorized organizations have concluded an agreement with the Academy of Sciences of the Czech Republic on the scope and conditions of archaeological research. The Act on the national heritage care also regulates the elements of agreements on conducting research, ownership of findings, payment of the costs of conducting research, measures in case of breach of obligations, etc. The protection of archaeological heritage, including the spatial planning process, and the management of archaeological finds are also dealt with in the Convention for the Protection of the Archaeological Heritage of Europe (the so-called Malta Convention), which is part of the Czech legal order. If archaeological research is carried out on listed buildings and sites, it is necessary to discuss the research plan with the expert organisation of the state heritage protection (National Institute for the Protection and Conservation of Monuments and Sites) and obtain a positive opinion of the executive body of the state heritage protection (Bureš 2014).

On the basis of the above principles, archaeological research was also carried out on a total of six objects (charcoal platforms) as part of a dedicated project. During the pre-excavation phase, the research method chosen was a cut-through object. Furthermore, it was necessary to ensure all legislative steps resulting from Act on the national heritage care. As Mendel University in Brno is not among the authorised organisations, the archaeological research was carried out by the partner non-profit organisation Archaia Brno, z.ú., which meets all the requirements of the law. A structured application for an opinion on the research was sent to the Institute of Archaeology of the Academy of Sciences of the Czech Republic in Brno, which, in addition to the basic identification parameters of the applicant, contained information on the objectives and proposed method of research, the expected publication and other presentation of the research results, and the expected impact of the research results on the site in terms of archaeological conservation. The application must also include the

opinion of the relevant department of the National Institute for the Protection and Conservation of Monuments and Sites on the research plan. It is also a legal obligation to conclude an agreement with the landowner to carry out the archaeological research. It is the duty of every authorised organisation to notify the Institute of Archaeology of the commencement of archaeological research via the Archaeological Map of the Czech Republic application (https://amcr-info.aiscr.cz/). Submit a report on the results of the research – a report of the archaeological research to the Institute of Archaeology and, in the case of research on listed buildings and sites, also submit the finding report to the expert organisation of the National Institute for the Protection and Conservation of Monuments and Sites. In addition, publish a brief report on the work carried out in the next issue of the unreviewed part of the journal Přehled Výzkumů, published by the Institute of Archaeology of the Academy of Sciences of the Czech Republic in Brno.

The field excavation was carried out on pre-selected objects. The most appropriate form of excavation was a longitudinal probe half a metre wide, which ran from the approximate centre of the charcoal platform to its edge. The probe reached into the intact geology. The standards of fieldwork include the careful alignment of the trenches and their delineation with stakes and string. The excavation was carried out mechanically using spades, shovels and hoes in sequence according to the stratified layers. If they are recognizable, they can be distinguished from each other on the basis of color, material, and strength. All these parameters are recorded on the relevant stratigraphic unit form, which is part of the field documentation of the archaeological research. Care must be taken during the work to identify possible artefacts in the layers. These are labelled with the samples so that the probe, object and deposit from which they were recovered can be clearly identified. All work is documented photographically (Fig. 2) and also by drawing on millimetre paper at the appropriate scale, usually 1 : 20. After the work was completed and the appropriate documentation carried out, the site was backfilled and returned to its original state. The surroundings of the charcoal platforms were also examined with a metal detector.

Fig. 2: Photographic documentation of the excavation

**Results**

During 2020-2022, six charcoal platforms were explored. The excavation involved a team consisting of a lead archaeologist and approximately five fieldworkers who were mainly involved in manual excavation. Work on a single object took the team 8-10 h depending on the size of the probe undertaken, which varied according to the nature of the particular platform. Approximately twice the time then had to be invested in the evaluation of each of the objects investigated, the production of the relevant Report of the archaeological research and the subsequent basic publication. No archaeological artefacts could be identified in any of the probes undertaken and so mainly charcoal samples were collected for further analysis. Thus, the main archaeological results of the research can only be considered to be the documented stratigraphy in the individual probes, which, however, is very simple and does not allow to distinguish several chronological phases within one object. It was also a beneficial finding that in some cases it was possible to identify the edge of the charcoal platform, which was sharply defined at an angle close to ninety degrees. The results of the metal detector survey did not yield any information on artifacts that could be associated with working activities related to charcoal burning. In particular, metals of recent age (less than 50 years old) were identified on the charcoal platforms or in the immediate vicinity, i.e. within a maximum distance of 3 m from the edge of the feature. These included unspecified iron fragments and metal food and drink packaging.

## Discussion

The contribution of archaeology to the study of charcoal platforms lies not only in the identification of objects in the field and the methodological provision of sampling, but also in the evaluation of the cultural and historical value of the charcoal platforms and in the eventual determination of their monument protection. Like a number of other archaeological sites in forests, former charcoal piles are directly threatened not only by natural influences, but above all by human management, and thus also become an integral part of nature conservation features. For this reason, it is necessary to accentuate and raise awareness of the importance of these monuments and to look for their possible use, for example in tourism.

The relief of the flat terrain, which is built into the gentle slopes, makes it easy to visit, even though they are otherwise very inconspicuous and are often visited unconsciously. The recent 'waste' found on the charcoal platforms is indisputable evidence that the area of the charcoal platforms may have been secondarily used, for example, as a resting place for forest workers, or anyone who was in the forest looking for a suitable place to relax. The fact that all the identified charcoal platforms were within easy reach of paths that are still widely used today is also favourable. All of these aspects, and of course a number of others, can be used to promote the relics of the charcoal piles and to design a possible tourist route that would guide visitors through the forest environment and offer them an overall insight into the landscape with the remains of the historic charcoal mining craft. The arguments put forward can then also be used from a nature conservation and conservation point of view. Due to the large number of platforms that survive in the forest it is impossible to consistently protect all of them. If, however, selected specimens were to become the subject of a designated hiking route (nature trail), it would be possible to subject at least them to thorough protection.

## Conclusion

The article presented the procedures and principles of archaeological investigation of charcoal platforms on the example of six objects from the Drahany Highlands. The basic scheme outlined the steps preceding the actual field excavation as well as the generally applicable methodological principles of fieldwork. In particular, all the important factors arising from the Act on the national heritage care, which define who is entitled to carry out archaeological excavations and under what conditions, were emphasised. The course of the archaeological excavations carried out at the charcoal platforms was also described with an example of basic documentation. It turned out that the obtained archaeological data are not representative enough to compensate for the time-consuming method of excavation and the subsequent processing of all documentation into the required form. However, this statement does not in any way negate the fact that the charcoal platforms must be considered as valuable evidence of historical craftsmanship, which has its place in both heritage conservation and nature conservation.

## References

Bobek, P., Brejcha, R., Dejmal, M., Houška, J., Johanis, H., John, J., Přibylová, M., Sedláčková, L., Suchánková, S., Szabó, P., Šimík, J. (2021). Uhlířství a jeho archeologické doklady – historicko-archeologický pohled na provozování řemesla, Archaeologia technica 32, 31–56.

Bureš, M. (2014). Management archeologického dědictví. Plzeň.

Harris, E. C. (1989). Principles of archaeological stratigraphy. London – San Diego – New York – Berkeley – Boston – Sydney – Tokyo – Toronto (second edition).

Neustupný, E. (1993). Archaeological method. Cambridge.

Neustupný, E. (2007). Metoda archeologie. Plzeň.

## Acknowledgement

Supported by the Ministry of Culture of the Czech Republic in the frame of the programme for support of applied research and experimental development of national and cultural identity for the years 2016-2022 (NAKI II), project “Mapping the cultural heritage of human activities in forests”, No. DG20P02OVV017.

## Souhrn

Článek prezentoval na příkladu šesti objektů z území Drahanské vrchoviny postupy a principy archeologického zkoumání zaniklých milířů. V základním schématu byly nastíněny kroky předcházející vlastnímu terénnímu odkryvu a také obecně platné metodické zásady realizace terénních prací. Akcentovány byly především všechny důležité faktory vyplývající z památkového zákona, které definují, kdo je oprávněn provádět archeologické výzkumy a za jakých podmínek. Popsán byl rovněž průběh realizovaných archeologických výzkumů uhlířských pracovišť s ukázkou základní

dokumentace. Ukázalo se, že získaná archeologická data nejsou natolik reprezentativní, aby dokázala vyrovnat časovou náročnost zvolené metody odkryvu a následné zpracování veškeré dokumentace do požadované podoby. Toto konstatování však v žádném případě nerozporuje fakt, že uhlířské plošiny je nutné považovat za cenný doklad historického řemesla, které má své místo jak v památkové péči, tak ochraně přírody.

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