

# THE GRAVETTIAN OCCUPATION OF THE UHERSKÉ HRADIŠTĚ AREA

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## Abstract

**The aim of this paper is to present one of the important and hitherto little known Gravettian microregions. In addition, this paper provides preliminary information about an ongoing project of the Grant Agency of the AS CR, focusing on the Paleolithic occupation of the Uherské Hradiště area.**

**KEYWORDS:** settlement pattern, Gravettian, Uherské Hradiště area

## 1. Geography

The Uherské Hradiště area lies halfway between the Dolní Věstonice-Pavlov microregion (approximately 65 km to the southwest) and the Předmostí microregion (approximately 40 km to the north). In fact, the Uherské Hradiště area connects these two settlement microregions.

Using geographic coordinates, the region of interest is located as follows: latitude between 48°50' and 49°11' north, longitude between 17°15' and 17°35' east. In a current map, the region is bordered by the town of Napajedla to the north and Veselí nad Moravou to the south. Geographically, the Uherské Hradiště microregion represents the northern termination of the Vienna Basin (Carpathian intramontaneous Neogene Basin) known as the Lower Morava Valley. The Lower Morava Valley is flanked by the Chřiby Highland to the west and Vizovice Highland to the east. The highlands come closest to each other around Napajedla, where they form one of the most important passages in Moravia – the Napajedla Gate. The whole region is drained by the Morava River and its smaller tributaries. The Gravettian sites are located on the margins of the highlands within sight of the Morava River.

## 2. History of research

The history of Paleolithic research in this region may be divided into three main stages. The first stage, starts at the beginning of the twentieth century, is connected with the “*Starý Velehrad*” association. The association members and other interested individuals initiated an intensive field survey of the region, and during World War II they reported several Paleolithic sites in their journal “*Sborník velehradský*”. Paleolithic finds from Velehrad (Zelnitius 1938, 16), Ostrožská Nová Ves (Hrubý 1940, 27; Horsák 1940, 93; Horsák 1941, 90, 92), Boršice u Buchlovic (Hrubý 1940), Mařatice (Skutil 1940, 59), Kunovice (Horsák 1941, 89), Derfle (yet Sady, Horsák 1942, 71), and Tučapy (Horsák 1942, 75) were published here. According to a recent critical analysis, only the finds from Ostrožská Nová Ves and Boršice may be dated to the Gravettian period. An isolated and sporadic salvage excavation was carried out in 1938 by Vilém Hrubý in Sptylněv. He excavated two concentrations of Paleolithic artifacts that were associated with bones and charcoal, and one osteological deposit. However, his stratigraphic observations are unclear, due to his lack of experience in Pleistocene geology and the circumstances of the rescue excavation on a new road construction. During World War II and later, Hrubý continued an intensive survey

of the region, and published all recorded Paleolithic artifacts and Pleistocene faunal remains from the region (Hrubý 1951). In his article *“The Paleolithic Finds from the Uherské Hradiště Area”* (Hrubý 1951), he reported Paleolithic finds from more than 50 locations on the cadastral territories of 25 villages. The publication of this paper brings to a close the first stage of Paleolithic research - a period dominated by enthusiastic amateur archaeologists interested in prehistoric research in their region.

The second stage of Paleolithic research saw two salvage excavations and intensive surface surveys, carried out by a new generation of amateur archaeologists. The first salvage excavation was undertaken by Bohuslav Klíma in Boršice – “Chrástka”. This site had been known since the beginning of the twentieth century and had been surveyed by several amateur archaeologists (Hrubý 1940, 1951). At the beginning of World War II, in 1939, Hrubý opened a small trench and uncovered isolated bones and artifacts (Hrubý 1951, 71). After World War II, František Kalousek chose this site for a systematic excavation. The results of this excavation were, however, negative. In the early sixties, a former employee of Institute of Archaeology, Bedřich Vyskočil discussed with Klíma concerning Paleolithic cultural layers disturbed by deep ploughing for a new vineyard. Klíma carried out a small-scale rescue excavation and one of his trenches (trench A) documented a cultural layer in situ. The trench A yielded a series of 258 artifacts in association with a small mammoth bone deposit and charcoal (Klíma 1964). Based on stratigraphy and artifact morphology, Klíma attributed the site to the Pavlovian, a classification that was confirmed 35 years later by <sup>14</sup>C dating (Svoboda 1999, 147). The second salvage excavation was carried out in Jarošov (which is today incorporated within Uherské Hradiště). During the construction of a new sporting area with an artificial skiing slope and tennis court, Rudolf Procházka and later Karel Valoch together with Luděk Seitl excavated two, probably separate concentrations of faunal remains (mainly mammoth) with isolated stone artifacts (Procházka 1983, Seitl and Valoch 1998). At the same time, surface surveys carried out by amateur and professional archaeologists continued. However, only finds collected by Vyskočil were systematically examined by Klíma, who deposited this collection at the Institute of Archaeology in Brno (the Gravettian site of Boršice – “Chrástka” and the Aurignacian site of Boršice – “code 331”) and published a smaller collection from the site of Stříbrnice (Klíma 1972); the activities and collections of other individuals were not documented. Another surface collection was collected and published by Valoch from the site of Hostějov (yet on the boundary between the cadastral territories of the villages Osvětimany and Žeravice; Valoch 1985). Klíma (1952) and later Martin Oliva (1998) surveyed the region of the Napajedla Gate and reported a series of sites on the cadastral territory of the town of Napajedla (M. Oliva 1998, he mentions amateur archaeologists such as A. Koutný, M. Šnajdr, and dr. Králík). Generally, the second period of Paleolithic research is characterized by continuing surface surveys associated with two rescue excavations carried out by professional archaeologists.

The third stage of Paleolithic research begins in the early 1990, and it is connected with two projects. The first project was carried out by researchers of the Institute of Archaeology, AS CR, under direction of Jiří Svoboda (Svoboda *et. al.* 1995, 1999, 2000). As a part of this project, material from the eponymous site of the Pavlovian – Pavlov I – was published (Svoboda ed. 1994, 1997), a series of Gravettian sites was re-excavated, and collections from several other sites were reexamined. During the field surveys, the site of Jarošov II (Institute of Archaeology site - IA) was discovered, and because the stratified cultural layer had been disturbed by agricultural activities, the site was subjected to salvage excavation between 1996-2000 (Škrdla 1999b, 2001; Škrdla and Kruml 2000; Škrdla and Musil 1999; Škrdla and Lukáš 2000). Almost 20,000 stone artifacts, faunal remains, pieces of red ochre, and baked clay lumps were recorded. A final study and evaluation of these materials are in progress. Simultaneously, we checked all the known museum collections containing materials from this region (the Institute of Archaeology, AS CR, at Brno, the Slováké museum at Uherské Hradiště, the museum in Zlín, the Moravian Museum in Brno) and initiated an intensive field survey of the region, with the aim of verifying and relocating previously identified sites and to locate new ones. The region under study was digitalized and a 3-D map was constructed. All currently published sites were identified in the field and located using in absolute

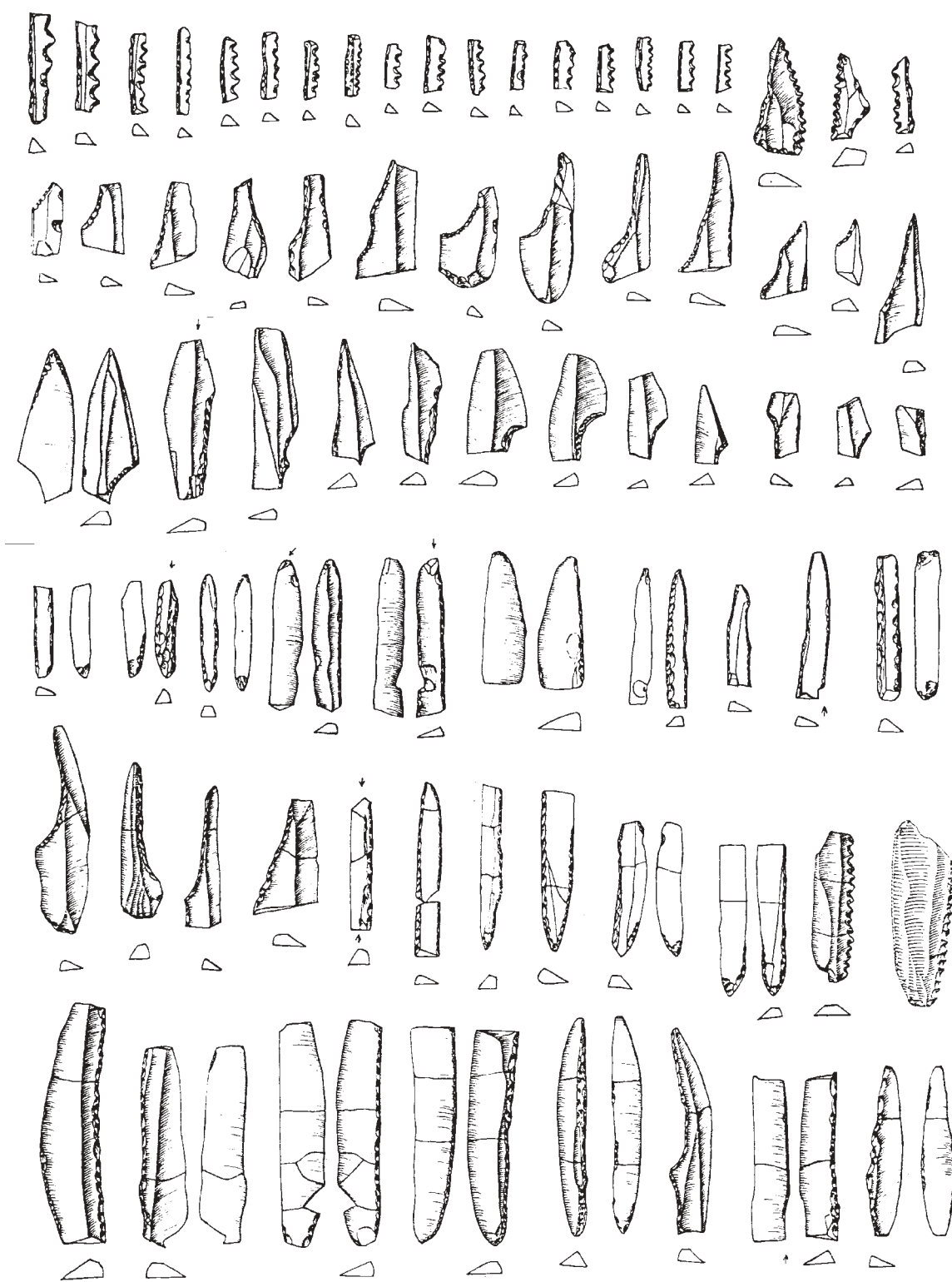


Figure 1. Jarošov II – IA site. Selected artifacts.

coordinates (using GPS). A minimum of 15 new sites were recorded, but only two small sites evidently belong to the Gravettian (Kněžpole – “Hrádek” and Spytihněv – “Duchonce”), the rest representing sites of the Morava-type Aurignacian and non-diagnostic collections. The project is in progress and will be completed in 2005 by a final monograph including materials from the site of Jarošov II accompanied by a catalogue of the related Paleolithic sites. A parallel project was carried out in the 1990’s by Oliva of the Moravian Museum, who carried out surface surveys in the area of Napajedla Gate and published the Gravettian materials from this region (Oliva 1998), however, with limited critical reanalysis of the earlier finds and sites, and, as a result, with is a series of inaccuracies. With the exception of Bořek Žižlavský who reported two sites from the cadastral territory of Buchlovice (Žižlavský 1999), no other amateur activities are known from this last stage.

### 3. The sites

The sites of the Uherské Hradiště settlement area form a chain, starting at the Napajedla Gate and continuing along the both banks of the Morava River. The settlement may be divided in two microregions (the Jarošov microregion and the Spytihněv-Napajedla microregion), and two isolated sites – Boršice and Ostrožská Nová Ves.

### 4. The Jarošov microregion

The sites within the cadastral territory of Jarošov and its vicinity form a cluster around the site of Jarošov II, which includes site IA and two faunal concentrations with isolated artifacts nearby, a smaller site of Kněžpole – “Hrádek”, and isolated finds at Mařatice – “Kolébky”.

The richest site is the Jarošov II-IA site, located on the northwestern slope of the hill Černá hora, the summit of which reaches an elevation of 302 m. asl. The altitude of the site is 245 m. asl., the distance from the artificially regulated channel of the Morava River is 0.5 km, and the spot allows the control of a wider area of the river basin as far as the southern entrance of the Napajedla Gate. The site was excavated between 1996-2000 by P. Škrdla. This excavation yielded a stratified collection of 2,020 artifacts over 1.5 cm in size that were inventoried in 3-D, and another 17,361 screened artifacts (smaller than 1.5 cm). The surface collection from this site consists of another 740 artifacts. Only preliminary data concerning the raw materials and typology are available. The raw material spectrum consists of mainly Krakow-Czestochowa Jurassic flint (typical and atypical varieties, ca 80%), erratic flint, radiolarite and other silices. A specific feature of this site is the total dominance of backed microliths (90% of tools) in the typology, which is outside the range found in other Gravettian assemblages (perhaps this is the result

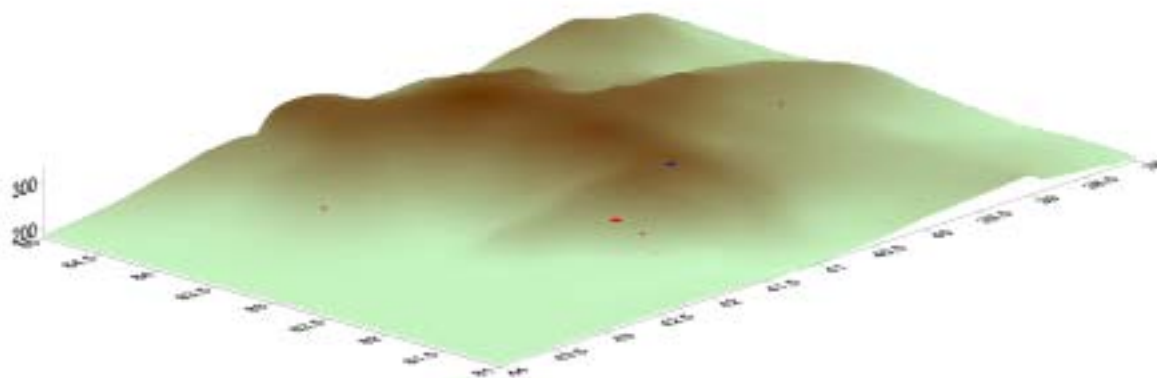


Figure 2. The location of sites in the Jarošov microregion. Scale in km.

of intensive wet screening). The analysis of faunal remains carried out by R. Musil is in progress. The remains are distributed over an area ca. 50 m in diameter and the site may be classified as a medium-sized locality.

Some 200 m to the south and ca. 20 m downslope from the IA site, two concentrations of faunal remains (mainly mammoth) were excavated (the distance between the two is 20 m), with isolated stone artifacts (Procházka 1983, Seitzl and Valoch 1998). From these contexts, Procházka only found 4 artifacts and Valoch a further 8. However, neither the relationship between these two concentrations, nor their relationship to the IA site are clear. There are two possible hypotheses concerning the relation between the main site and the faunal remains. The first hypothesis predicts contemporaneity (as in Dolní Věstonice I and II or Předmostí) and the second one different age for the individual parts of the site. As a result, these two concentrations may either be described as specialized activity areas or areas of episodic settlement. Unfortunately, no datable samples from either Valoch's or Procházka's excavation are available, and the possibility of re-opening their excavations is limited because these areas were probably completely excavated. Recently, A. Verpoorte (personal communication 2003) dated a mammoth humerus fragment from Valoch's excavation. It provided a date about 2,000-3,000 years younger in comparison with the series of dates from the IA site (Table 1). However, the bone was stored without conservation for 20 years in a museum depository, and may be contaminated. Therefore, in the summer of 2003, a small trench was carried out near the Procházka's earlier excavation in order to recover some new datable material.

The small surface site of Kněžpole – “Hrádek” is located on the north-facing crest of the slope of Rovnina Hill, the summit of which reaches an elevation of 336 m. asl.; the distance from the artificially regulated channel of Morava River is 1.5 km. This site yielded a collection of 28 artifacts made mostly of erratic flint (19 pieces), and radiolarite (7 pieces), one piece of porcelanite and one piece of silicified sandstone with glauconite. The artifacts were sporadically distributed over an area 50 m in diameter, and the site may be classified as small-sized.

Three isolated artifacts were collected at Mařatice – “Kolébky”, on the edge of a blind valley on the southern slope of Rovnina Hill. The altitude is 250 m. asl.; the distance from the artificially regulated channel of the Morava River is 3 km. The artifacts were sporadically distributed over an area with a diameter of 50 m and the site may be classified as an occasionally visited one.

## **5. The Spytihněv-Napajedla microregion**

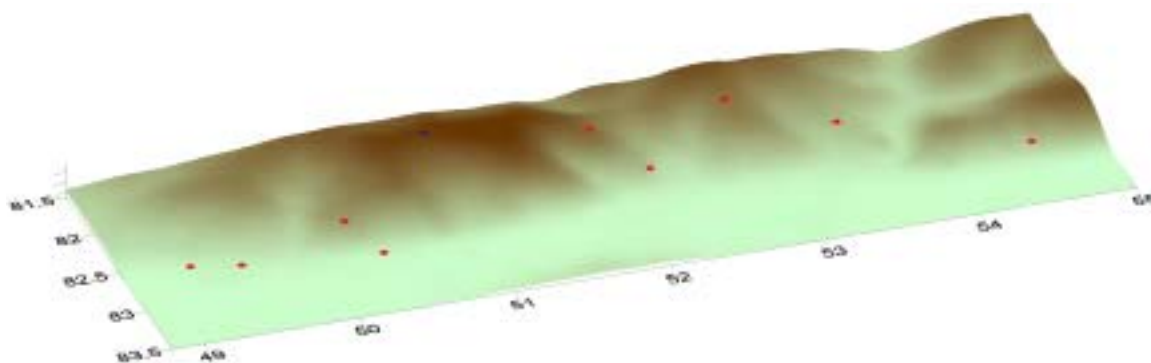
Within the cadastral territory of Spytihněv and Napajedla there are ca. 10 sites located on the eastern slopes, for 5 km bordering the right bank of the Morava River inside the Napajedla Gate. In the following paragraphs, the sites are described from south to north.

In 1938, Hrubý carried out a salvage excavation at a new road construction site in Spytihněv. He documented three findspots at the foot of a hill, the summit of which reaches an elevation of ca. 300 m. asl. The altitude of these findspots lied in about 188 m. asl.; the distance from artificially regulated channel of the Morava River is 100 m, and their locations allow the control of the southern entrance of the Napajedla Gate. Two findspots, with stone artifacts and faunal remains, were located in the “Němeča” field and the third, with only faunal remains, in the “Podvinohradí” field. The collection from Němeča is stored in the Museum of Moravian Slovakia in Uherské Hradiště and consists of 29 artifacts; however, the question of its homogeneity is open, because several probably post-Paleolithic artifacts were included in it. The raw material is erratic flint, in five cases Krakow-Czestochowa Jurrassic flint, one case is radiolarite and another is a local raw material. However, the Krakow-Czestochowa Jurrassic flint and the radiolarite (Széngál type from Hungary) represent post-Paleolithic rather than Gravettian artifacts. Typologically, the collection looks like a selection of nice artifacts (mainly long blades)



and tools. The typological spectrum consists of three endscrapers, two double endscrapers, one multiple burin and two combinations endscrapper/burins. The artifacts were excavated from a low elevation not typical for the Gravettian, and several interpretations of the site function are likely: a short-time site, a hunting or butchering place, or a downslope redeposition. At the moment I prefer the last possibility because of the lack of a loess cover above the findspots, and the new discovery of a smaller site in the “Duchonce” field, in the above area where the loess cover starts at the altitude of 250 m. asl. - as is characteristic for the Gravettian. Because of the still unresolved questions about the site function and its geological context, we plan a limited trenching for the summer of 2004.

The site of Spytihněv - “Duchonce” is located directly above Hrubý’s findspot with a concentration of faunal remains in the “Podvinohradí” field. The altitude of this site is 250 m. asl.; it lays about 60 m above the site of “Podvinohradí”. The site was discovered in the spring of 2003 and surface surveys since that time have yielded a collection of 11 stone artifacts and isolated bone fragments. The stratigraphic position of the finds was verified by a small excavation in 2003. This limited excavation (it covered an area of only 18 m<sup>2</sup>) yielded a series of ca. 400 artifacts (including microchips), in association with the series of bones (mainly mammoth) and charcoal in situ in a preserved loess deposit (thickness up to 25 cm) lying directly below the plough zone. The artifacts are produced mainly on erratic flint, with only several pieces of radiolarite present. In contrast with Jarošov II, no microliths were found even though all sediments were sieved. This site may be classified as a small one. The central part of the site is characterized by a concentration of microchips and has the shape of an irregular circle with a diameter of 3 m. The bigger bones were located on the margins of this concentration and reflect the so-called “centrifugal effect” (cf. Svoboda *et al.* 1993). No traces of a hearth were documented. Based on the number of artifacts, the site dimensions, and refittings, the site may represent a “single event”. Further excavation of this site is being prepared.



**Figure 3. The location of a sites in the Spytihněv-Napajedla microregion. Scale in km.**

The site of Napajedla II is located on a northeast-oriented crest on the slope of Maková Hill, whose summit reaches an elevation of 338 m. asl. The altitude of the site is 290 m. asl.; the distance from the artificially regulated channel of the Morava River is 1 km, and the location allows a control of the Napajedla Gate. The material of this site is stored in the Moravian Museum and it has been described by Oliva (1998). According to this author, the collection of artifacts numbers about 1,000 items, mostly made of erratic flint (occasionally Troubky-Zdislavice chert and rock crystal). The typological spectrum consists of burins, one endscrapper, and a series of about 20 microlithic artifacts (mostly backed microblades, an occasionally microgravette, and other two microlithic points), and varia. The artifacts were distributed over an area of about 50 m in diameter, and the site may be classified as a medium-sized one.

The site of Napajedla III – “Brickyard” lies lower on the same slope, at an altitude of about 210-220 m. asl. It yielded only a small collection of ca. 25 finds, including several burins and a backed microsaw (Oliva 1998). The artifacts are made mostly of erratic flint (80%) and radiolarite (20%). The site may have been connected with Napajedla II.

One kilometer to the north of Napajedla II site lies another important site, Napajedla I – “Šardica”, the richest one within the Spytihněv-Napajedla microregion (ca. 2,000 collected artifacts). The site is located on an eastern-oriented crest on the slope of a hill, the summit of which reaches an elevation of 364 m. asl. The altitude of the site is between 270-295 m. asl.; the distance from the artificially regulated channel of the Morava River is 1.5 km, and the location allows a control of the Napajedla Gate. Basing on the spatial distribution of artifacts, the site may include several units, partly overlying each other; therefore new surveys were carried out in three sectors (Oliva 1998). M. Oliva (1998) described the material stored in the Moravian Museum, Brno and the Museum of Zlín. The raw material spectrum consists of erratic flint (66%) and radiolarite (25%), supplemented by local raw materials. The radiolarite dominates in the lower part of the site. The typological spectrum is composed of burins (53%), endscrapers, often laterally retouched (11%), microlithic artifacts (backed microblades – 2.6%, geometric microliths are missing), combined artifacts (10%, repeatedly a burin with endscrapper or another tool) and multiple tools (11%), rarely borers, truncated pieces and Kostenki-type knives, points, sidescrapers, notched and denticulated tools, splinters, etc. (for more details see Oliva 1998). Based on the presence of specific wedge-shaped cores for microblades (see Oliva 1998, figs. 2:5-6), the presence of Troubky-Zdislavice chert, and an altitude ranging up to 290 m. asl., i.e. features more typical for the local Morava River-type Aurignacian, a possible mixture with the Aurignacian cannot be excluded. The artifacts were distributed over an area with diameter of ca. 250 m, and the site may be classified as medium-sized one.

In addition, Oliva (1998) mentions further small sites with non-diagnostic artifacts within the same area: Napajedla V, VI, VIII.

## 6. The site of Boršice – “Chrástka”

This site is located on the right bank of the Morava River, on the northeastern slope of a hill, the summit of which reaches an elevation of 340 m. asl. The altitude of the site is 264 m. asl.; the distance from the artificially regulated channel of the Morava River is 3.6 km, and the location allows control of a wide area of the river basin. The artifacts were collected over an area of about 100 m in diameter. There are three main collections: Klíma’s stratified assemblage (258 artifacts), Vyskočil’s surface collection

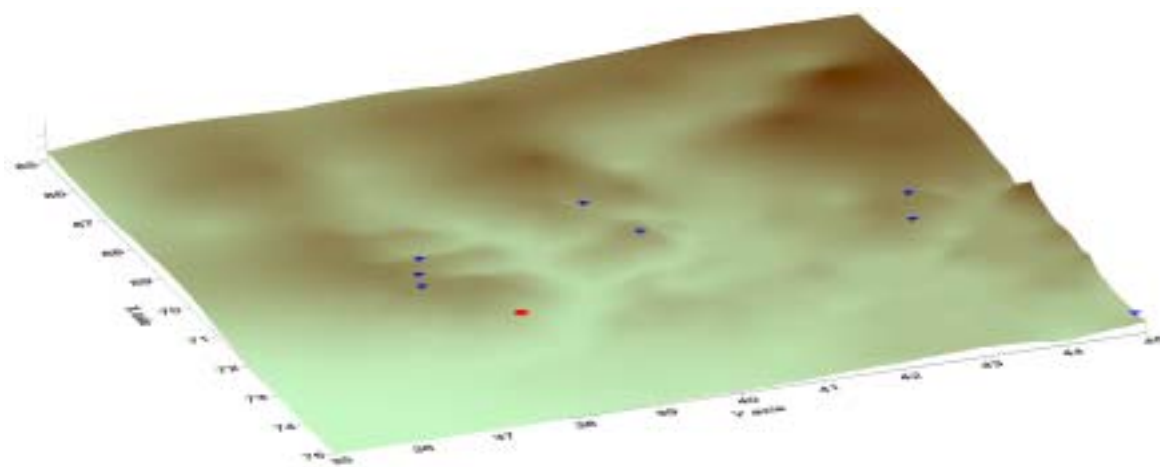


Figure 4. The location of the Boršice – “Chrástka” (ring) site in comparison to other Aurignacian sites (triangles). Scale in km.

(576 artifacts) and a collection stored in the Museum of Moravian Slovakia in Uherské Hradiště (in particular, Suchánek's and Hrubý's collections, ca. 1500 artifacts). The raw material spectrum of the Klíma collection is characterized by the total dominance of erratic flint, supplemented by occasional pieces of radiolarite (2), Krakow-Czestochowa Jurassic flint (3), and 15 others (mainly fired artifacts). The typological spectrum of this collection is composed of one partially backed microblade, three burins (two on broken blades, one atypical transverse burin on lateral retouche), one artifact ranging morphologically between an endscraper and a truncated blade, two points and one double point, two combined tools (multiple burin and combination burin/notch), a retouched blade, a splinter and a chissel. This collection is supplemented by surface finds of Vyskočil, who collected more microliths (five backed microblades, a pointed backed microblade, a denticulated backed microblade, and a microgravette), and a series of burins (15 simples and 5 multiples). The endscrapers were not documented in either collection. The site may be classified as a medium-sized locality. The collection in the Museum of Moravian Slovakia has been analyzed by Oliva (1998).

## **7. The site of Ostrožská Nová Ves – “Padělky”**

The site is located on the left bank of the Morava River, on a slight elevation close to the foot of the western slope of a hill, the summit of which reaches an elevation of 250 m. asl. The altitude of the site is 190 m. asl.; the distance from the present controlled course of the Morava River is 3.2 km, and the location allows a control of a wide portion of the river basin. A small surface collection of artifacts (ca. 100 pieces) was collected predominantly by František Botek and it is actually separated in two museum collections (the Moravian Museum in Brno and the Museum of Moravian Slovakia in Uherské Hradiště). The site is not stratified and the finds were collected over an area of about 100 m in diameter, free of loess. The artifacts are mostly made of erratic flint, occasionally of radiolarite, and Krakow-Czestochowa Jurassic flint. The typological spectrum consists of two microliths (backed microblades), six endscrapers (one of them steeply retouched), three burins (two dihedral, one made on point), two splinters, and a raclette. From the technological point of view, the artifact dimensions are smaller compared to the other Gravettian sites in the region. The site may be classified as a small-sized one.

## **8. Dating**

Only two sites, Jarošov II and Boršice, provided <sup>14</sup>C dates. The remaining sites were not dated either because of missing datable samples from previous excavations, or because of a lack of organic material in the case of the surface sites. According to the <sup>14</sup>C dating, the Gravettian occupations of the Jarošov II-IA site and Boršice – “Chrástka” are associated with the Evolved Pavlovian stage (cf. Svoboda ed. 1994, van der Plicht 1997). There is a problem with possible contamination in the date from Valoch's excavation of faunal remains at the Jarošov II - faunal deposit. Another question is the slight difference between the dates from the Groningen and Vienna laboratories: the Vienna results seem to be slightly earlier than those from Groningen.

During 2003, more datable samples were obtained from the sites of Jarošov II - Procházka's excavation (bones), and Spytihněv – “Duchonce” (charcoal and bones), while the test pits at the sites Kněžpole - “Hrádek” and Spytihněv – “Němeča” did not provide samples.

## **9. The Gravettian settlement strategy**

As a first step, we digitized the areas of interest and created 3-D maps using the Surfer (from Golden Software) program. We chose to use the 1:25,000 scale maps of “General Staff” of the Czechoslovak Army from the middle of twentieth century, using S-42 Map datum (Czechoslovakia), which are digitized



No.	sample name	location	value	
GrA-11454	Boršice 1964	trench A	25 040 ± 300	BP
GrA-9604	Jarošov II-1	S18, S19, S32, S33	25 780 ± <sup>250</sup> / <sub>240</sub>	BP
GrA-9613	Jarošov II-2	S18	25 110 ± <sup>240</sup> / <sub>230</sub>	BP
GrA-15137	Jarošov II-3	S126d	26 220 ± <sup>390</sup> / <sub>360</sub>	BP
GrA-17191	Jarošov II-4	S137a, S137c	26 340 ± 180	BP
GrA-17087	Jarošov II-5	S151c, S151d	26 950 ± 200	BP
VERA-757	Jarošov II-01	S47c	27 200 ± 200	BP
VERA-758	Jarošov II-02	S59b	26 900 ± 200	BP
VERA-759	Jarošov II-03	S74b, S75a	27 200 ± 200	BP
GrA-20495	Jarošov, excavation 1980 (K. Valoch)	bone accumulation	23 120 ± 200	BP

**Table 1. Radiocarbon datings overview.**

in a grid of 250 m. Using these coordinates, we identified the location of the sites. During the field data recording we used a GPS personal navigator (eTrex from Garmin).

In a preliminary studies of settlement geography (Škrdla and Svoboda 1998, Škrdla and Lukáš 2000), we specified eight characteristics of the Pavlovian settlement strategy:

1. a location along an important river
2. a location on expressive features in the landscape
3. a strategic position which allows:
  - a) control of the river valley in general
  - b) control of the “gates” within the valleys
  - c) control of the confluence of important rivers
4. predominantly northern orientation of the locality
5. located on the slope of a hill (usually with a peak reaching an altitude of more than 300 m. asl.)
6. altitudes of the sites range between 200-290 m. asl.
7. relative altitudes range between 10-100 m above the present river level
8. small streams and springs are located in the vicinity

The preliminary analysis demonstrates a strong association of these features with Gravettian/Pavlovian localities. On the basis of these results, we argue in favour of a high degree of standardization in the Pavlovian settlement strategy. In addition, we argue that the Gravettian/Pavlovian settlement strategy

differs significantly from the Aurignacian strategy, which is characterized by sites at higher altitudes (about 300 m. asl.), on the top of elevations, in locations more distant from the river and placed more deeply inside the highlands.

The differences in settlement strategy of the various Paleolithic cultures are statistically tested in order to create a characteristic vector describing the particular settlement strategies. The results may allow archaeologists to date even small and inexpressive artifacts collections, as well as to predict new sites in the future.

## 10. Acknowledgement:

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