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ONDRATICE I/ŽELEČ – AN EARLY UPPER PALAEOLITHIC SITE IN CENTRAL MORAVIA

The earlier phase of MIS-3 period in the Middle Danube region is characterised by the presence of Late Micoquian, by so-called Middle to Upper Palaeolithic transitional industries including the Szeletian and Bohunician, and by the relatively early appearance of the Early Aurignacian (Svoboda / Ložek / Vlček 1996; Svoboda 2003). Based on radiocarbon dating all above mentioned cultural units could be contemporaneous. Unfortunately, the majority of sites reported from the late 19th century are surface sites where no stratigraphic observations or radiometric dating are possible. There is a series of localities showing transitional features including leaf points, an evolved Levallois concept and Upper Palaeolithic tools – i. e. characteristic features of several technocomplexes – in lithic assemblages. However, based on the surface nature of the assemblages, the question of homogeneity or heterogeneity of the collections is important. Therefore, the detailed study of the lithic assemblage combined with the aim to discover artefacts within intact sediments on the site margins are our current research topic. One of such localities represents the Ondratice I/Želeč site (okr. Prostějov).

This paper deals with a well-known surface site at the boundary of the cadastral areas of two villages: Ondratice-Velká Začákova and Želeč-Holase (fig. 1). This locality is situated in a field above the Ondratice sand mine and demarcated by a circle with a radius of c. 150 m around the point: 49.352264 °N-17.064489 °E (map datum WGS 84). Recently, a salvage excavation was realised 300 m east of the surface site (Škrdla / Mlejnek 2010). An artefact cluster in the vicinity of a hearth within intact sediments was discovered. The excavation still continues and its results will be subject of another paper.

The surface site is 330 m above sea level. Concerning geological conditions, the locality is situated on Culmian (Lower Carboniferous) shales covered by Lower Badenian (Miocene) sands (Kratochvíla / Paliza / Kozelková 2008, 5). Pleistocene loess with paleosoils, partly redeposited by gelifluction, and in other localities by the B-horizon of the Holocene soil and the ploughing horizon, superposes the Miocene deposits.

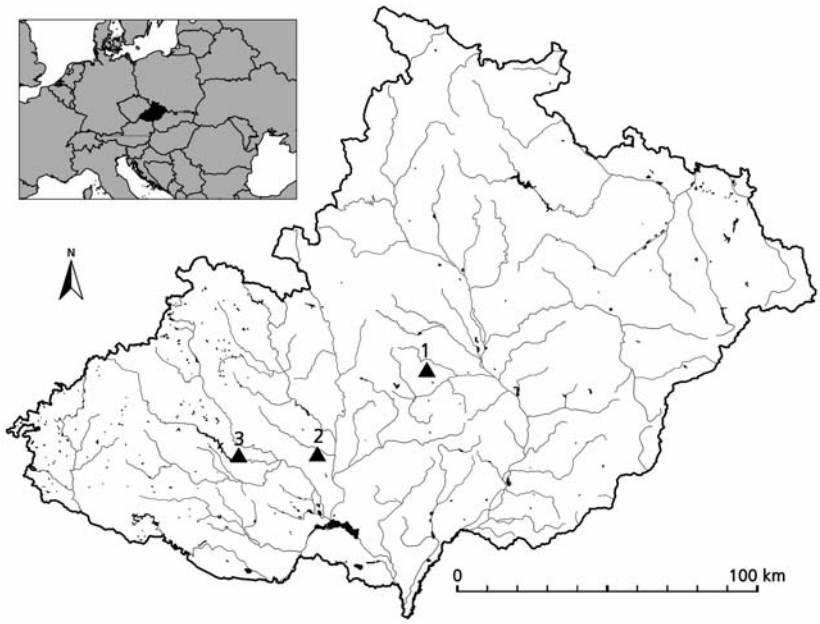

Fig. 1 Location of the site clusters discussed in this article: **1** Ondratice site cluster (Želeč, Ondratice, Drysice). – **2** Bobrava river valley site cluster (Ořechov, Želešice). – **3** Mohelno site cluster (Mohelno). – (Map P. Jansa / O. Mlejnek with use of Grass GIS).

From a geographical standpoint the site is located on the north-eastern edge of the Vyškov gate where it borders the Prostějov highland, which is a part of the Upper Moravian lowland. To the west are slopes of the Drahany highland. The landscape is undulating and drained by the Ondratice creek into the Haná river and onward into the Morava river.
In the course of the years 2009 and 2011 a systematic surface survey at the Ondratice I/Želeč Palaeolithic surface site has been realised within the framework of the current research project aimed at searching for new stratified Early Upper Palaeolithic sites in Moravia.

HISTORY OF RESEARCH

The Ondratice I/Želeč site is one of the earliest discovered Palaeolithic localities in Moravia. Hynek Hostínek and Jakub Možný collected stone artefacts there in the late 19th and early 20th centuries. Hostínek (1861-1909), a postal worker from Brodek near Prostějov, discovered the site in 1903 according to his own account from 1908 (Kopecký 1940; Skutil 1940). However, Absolon (1935) mentioned that the site was discovered in 1898 by Možný († 1948). His surface assemblages were published by Maška / Obermaier (1911). The artefacts collected by Hostínek were deposited in the Museum of Prostějov, and later published by Skutil (1933). The first brief description of the site comes from a paper by Bayer (1909, 155), who learned of it from a notation by Procházka (1907, 170) referring to an excavation of Inocenc Ladislav Červinka.
Červinka collected stone artefacts in a sunken road between Ondratice and Želeč while conducting geodetic measurements. According to his letter (Červinka 1915), he began to excavate there in 1907. Under a c. 40-50 cm thick plough horizon there was Tertiary sand in which a cultural layer was identified, at a depth of 30-70 cm. Červinka estimated the total area of the site at about 10,000 m^2 and allegedly excavated 4000 m^2. Although we believe this is an exaggeration we suppose that he conducted the largest excavation ever at this locality. Červinka found two artefact concentrations, which were interpreted as hearths. The first concentration consisted of two stone blocks surrounded by charcoal and isolated orthoquartzite artefacts. The second was formed by orthoquartzite blocks and charcoal. There was a concentration of orthoquartzite artefacts found near one of these blocks, interpreted by Červinka as a workshop. Due to the poor bone preservation he managed to identify only a few lamellas of mammoth tusks (*Mammuthus primigenius*) and one tooth of a polar fox (*Vulpes alopex*). On the other hand thousands of stone artefacts were excavated. Tools were rare, but the material included end-scrapers, leaf points and side-scrapers. Červinka compared this assemblage with the French Solutrean. Most of these objects were deposited in the Naturhistorisches Museum in Vienna, and a minor part of this collection was acquired by the later Ethnologisches Museum in Berlin. Some 300 artefacts were bought from Červinka by the Landesmuseum für Vorgeschichte Sachsen-Anhalt in Halle. These objects had been analysed by Karl Prosche in 1960.
In the interwar period the attention of many archaeologists (Breuil 1924; Bayer 1925; Menghin 1926; Menghin 1931; Obermaier 1928) was attracted to the assemblage of artefacts from this site, which was deposited in the Moravské zemské muzeum in Brno. These objects were collected by a new generation of collectors (Možný, Kopecký – school director in Brodek). Amongst a local archaeologist the assemblages were studied mainly by Skutil (1933; 1940) and Absolon, who focused his attention on the larger orthoquartzite artefacts which he termed *Gigantolithen* (Absolon 1936). Many lithics depicted in this monograph are just natural fragments, or falsifications bought from Možný, a local farmer. Možný was caught in the act, when found taking orthoquartzite blocks from a smokebox where he had stored them hoping they would acquire an archaic patina (Schwabedissen 1943; Oliva 2005). Other finds from Ondratice were depicted in the Býčí Skála cave excavation monograph (Absolon 1945).

In 1928 Josef Dania, a documenter from the Moravské zemské muzeum, conducted an excavation in Ondratice supervised by Absolon. According to Absolon (1935, 10) he unearthed an area of 49.5 m^2 to a depth of 2.5 m. He discovered one culture layer with orthoquartzite artefacts underneath chert artefacts. Absolon classified the chert objects as Solutrean and the orthoquartzite as Mousterian. According to Lothar F. Zotz, J. Dania noted that during this excavation all the artefacts had been found mixed within one layer (Zotz 1951, 175). Under the influence of Pelíšek, Absolon finally changed his view and published that just one cultural horizon was identified (Absolon 1945, 24).

The subsequent excavation, managed by Hermann Schwabedissen in the autumn of 1942, is also burdened with inconsistent findings. While Schwabedissen mentioned that he had unearthed just one culture layer with chert and orthoquartzite artefacts mixed together (Schwabedissen 1942, 44; Schwabedissen 1943), his technician Emanuel Dania (a cousin of J. Dania) later reported to Valoch that orthoquartzite objects had been found in separate layers deeper than the layer containing the silicite industry (Valoch 1967, 14). This is supported by Jan Ječmínek who also worked at this excavation. Its location had been chosen on the basis of test trenches dug in all directions outward from the main concentration of surface finds. At the point of the highest concentration an area of 30 m^2 was excavated (Schwabedissen 1942). Many chert and orthoquartzite artefacts were discovered, which resembled the surface finds.

At the end of the Second World War Pelíšek described a profile cut into a ravine near the spot at 332 m above sea level. According to his observations there was a 40 cm soil horizon on Miocene sands. This soil horizon was covered by 160 cm of loess, which was situated beneath the B-horizon and the plough horizon (Pelíšek 1944). In his following paper, based on the excavation of Schwabedissen, Pelíšek noted that Palaeolithic artefacts had been found mainly in the upper part of the red-brown B-horizon and sometimes directly in the plough horizon (Pelíšek 1946). At the highest spot a orthoquartzite industry was discovered in the Miocene sand. This finding was also published by Absolon (1945).

In the interwar period Kopecký collected artefacts in the Brodek area with his pupils. They managed to discover a few new Palaeolithic sites. Kopecký stirred an interest of the Palaeolithic in his pupil Jan Ječmínek (1923-1994), who became after the Second World War the most significant amateur collector in Ondratice. Because of his cooperation with Absolon and Valoch most of his finds were deposited in the Moravské zemské muzeum in Brno. His new assemblages replaced older ones destroyed at the end of the Second World War in Mikulov (okr. Břeclav) – with the exception of some orthoquartzite artefacts and one set of silicite objects. Other minor assemblages from Ondratice are deposited in Olomouc and Znojmo. Ječmínek was the first collector to separate finds from the largest site Ondratice I/Želeč, from those artefacts discovered at neighbouring sites. In the Ondratice sand mine he managed to find a few bones at the base of the loess layer, which were identified by Rudolf Musil as mammoth (*Mammuthus primigenius*) and horse (*Equus germanicus*) (Valoch 1967, 20).

In 1965 Valoch, in cooperation with Ječmínek, dug test pits at Ondratice I/Želeč with the view to finding the 1942 excavation site. The consolidation of plots of land which took place in the 1950s made it difficult for them to orient themselves in the landscape and their attempts proved unsuccessful (Valoch 1967). During this test dig 25 trenches were excavated and 15 profiles cut, but the cultural layer was not found. However, the observations of Pelíšek were confirmed. In some places a plough horizon sat directly atop the Miocene sand, and elsewhere there was a 60 cm thick red-brown B-horizon underneath the plough horizon. There were isolated stone artefacts found in this layer in seven trenches. In protected places a loess stratum was preserved under the B-horizon. In two trenches soil sediment was visible underneath the loess. On the basis of older observations Valoch (1967, 20) believed in the existence of one culture layer which could contain several settlement episodes. Valoch agreed with Prosche (1960) and assigned the assemblage to the

Szeletian (Valoch 1967, 22). A general overview of the opinions about the cultural identification of the Ondratice I/Želeč industry was published by Svoboda (1980a, 8), based on Skutil´s manuscript (1952).
Jiří Svoboda was the next archaeologist interested in this site. In the context of his thesis at Univerzita Karlova in Prague (Svoboda 1978), later published as a monograph (Svoboda 1980a), he analysed the orthoquartzite industry from collections in the Moravské zemské muzeum in Brno and in the Museum of Prostějov. In his analysis he focused mainly on knapping technology and the reduction of blocks of raw material into functional tools. Methodologically he used a dynamic classification of the lithic industry which was primarily in use in Central and Eastern Europe (see Ginter 1974). From a technological point of view he characterised the assemblage as an industry of workshop character with a relatively high proportion of blades (20.7%), cores for Levallois flakes (46.36%), and Upper Palaeolithic prismatic cores used for the production of blades (23.68%). Side-scrapers (36.9%) were the dominant tool, followed by end-scrapers (26.31%) and points. Mostly, there were points convergently retouched (Mousterian) and non-retouched Levallois points. Leaf points were not so numerous. Burins were rare (8.33%) as well as retouched blades, combinations and other tool types. Because of the significance of the Levallois technology in the analysed assemblage it was compared by Svoboda to the industry from Brno-Bohunice (Valoch 1976). On the base of these two collections and an industry from the surface site at Brno-Líšeň, the Bohunice type, later called the Bohunician was defined (Svoboda 1980a, 87-89).
In 1977 Svoboda tried to learn more about the site stratigraphy and the culture layer excavated by previous researchers (Svoboda 1977; Svoboda 1980b). The stratigraphy was observed in nine trenches and bore holes in the central part of the surface site, and on profiles in the sand mine at the border of the surface site. The bed was formed by Miocene sands, or Tertiary clay to the north. In the central part of the site the sands were covered by Quaternary loess. This loess was covered by the B-horizon of variable thickness and the plough horizon. No artefacts came to light and it was not possible to verify the position of the culture layer.
Over the last 30 years sand mining in Ondratice has advanced towards the border of the main concentration of surface finds at Ondratice I/Želeč. The neighbouring site of Ondratice Ia in the field of Malá Začaková was completely destroyed by mining. Silicite artefacts found there were analysed by Oliva (2004). According to his study the assemblage from Ondratice Ia resembles the collection from the Ondratice I/Želeč site. A major difference is the lower portion of the orthoquartzite artefacts. Tools are dominated by end-scrapers (20.8%), side-scrapers (19.3%), retouched blades (22.4%) and points (13.7%). Burins are rare (6.3%). Jerzmanowice and leaf points (10.7%) dominate over Levallois points and blades (2%), which are according to Oliva made only from Stránská skála chert. Oliva identified this assemblage as Middle Szeletian, on the basis of typological comparison with other similar collections, such as those from the surface sites of Vincencov (okr. Prostějov), Dobrochov (okr. Prostějov), Želešice I (okr. Brno-venkov) or Modřice IV (okr. Brno-venkov) (Oliva 2004, 69-75).
Since Svoboda's excavation, the central surface site of Ondratice I/Želeč has been set aside from the main stream interests of Moravian archaeologists. Since 1977 no one has tried to find there stratified cultural layers.

METHODOLOGY

In the framework of the abovementioned research project we systematically collected lithic artefacts at the surface at Ondratice I/Želeč between 2009-2011 (see fig. 2). We discovered 1421 objects of which 1397 were Palaeolithic. The finds from this surface survey comprise the assemblage analysed in this paper.
Because the site had been visited by so many researchers before us we presume that a great deal of interesting artefacts, such as tools and cores, as well as artefacts made of imported raw materials, was taken away by amateur collectors, while debitage, fragments and orthoquartzite industry were left behind. For

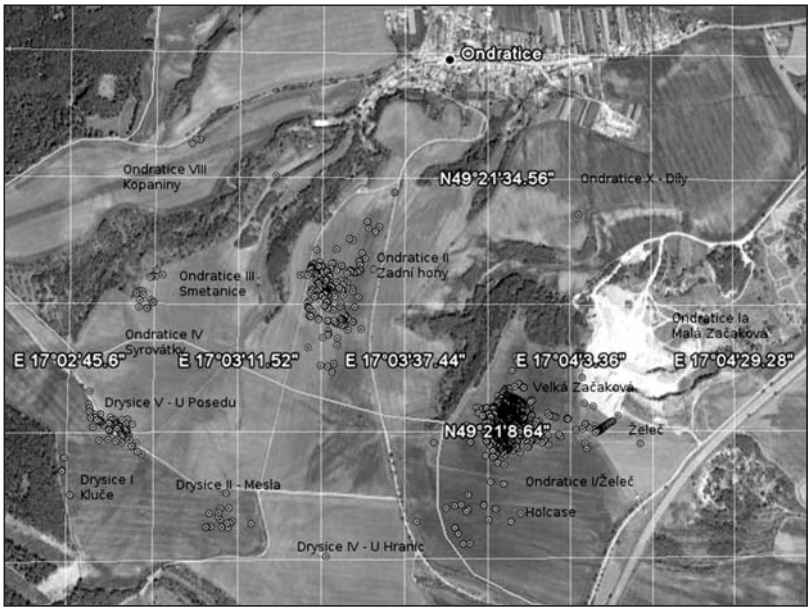

Fig. 2 Ondratice I/Želeč (okr. Prostějov/CZ). Aerial photo with locations of surface finds in the surroundings. – (Map O. Mlejnek / P. Škrdla with use of Google Earth program).

this reason we suppose that the typological and technological composition of our assemblage, as well as the raw material composition, does not resemble the composition that would have been found before research and amateur collections started at the site. Though we tried to gather all components of the lithic industry we presume that what we have collected is a »negative selection«, comprised only of those artefacts which remained after years of selective collection.

RAW MATERIALS

From the total number of 1397 Palaeolithic artefacts 487 pieces were smaller than 2 cm (in all dimensions). These objects were classed as trivial debitage. They were not examined to identify their raw material, but were screened for interesting typological or technological features. Of the 910 artefacts larger than 2 cm, there were 18 burnt exemplars, and it was possible to determine the raw material of 892 of them (**fig. 9a**). Most of them were made of local or semi-local material such as orthoquartzite (32%) and Moravian Jurassic cherts (MJC) (20%). Imported raw materials are erratic flint (10-13%), Stránská skála-type chert (9%), Krumlovský les-type chert (8%), Troubky-Zdislavice-type chert (8%), spongolite (6.5%) and radiolarite (2%).

The most common raw material in the assemblage is a local orthoquartzite called in the Czech geological literature »sluňák« (»sun boulder«; 32%), followed by MJC (20%), which come probably from the local gravels. Orthoquartzite blocks are generally found on the eastern slopes of the Drahany highland, sometimes they are even aligned in rows. For Palaeolithic people it was the most accessible, though not the very highest quality, raw material. The MJC, commonly used at the site, can be also semi-local; however, their origin in the sediments of Carpathian foredeep some 30 km southern from the locality is more probable. Within the Tertiary sediment of the Ondratice sand mine the authors found a fragmented pebble resembling Krumlovský les-type II chert. It is possible to distinguish an original pebble cortex on some of the MJC artefacts.

Erratic flint is the most common imported raw material (10%). Pieces weighting up to 30 kg of this material are found in moraines and other deposits of continental ice sheets in northern Moravia and Silesia and they were further redeposited by the activity of rivers or lakes. This raw material must have been imported from a distance of at least 85 km.

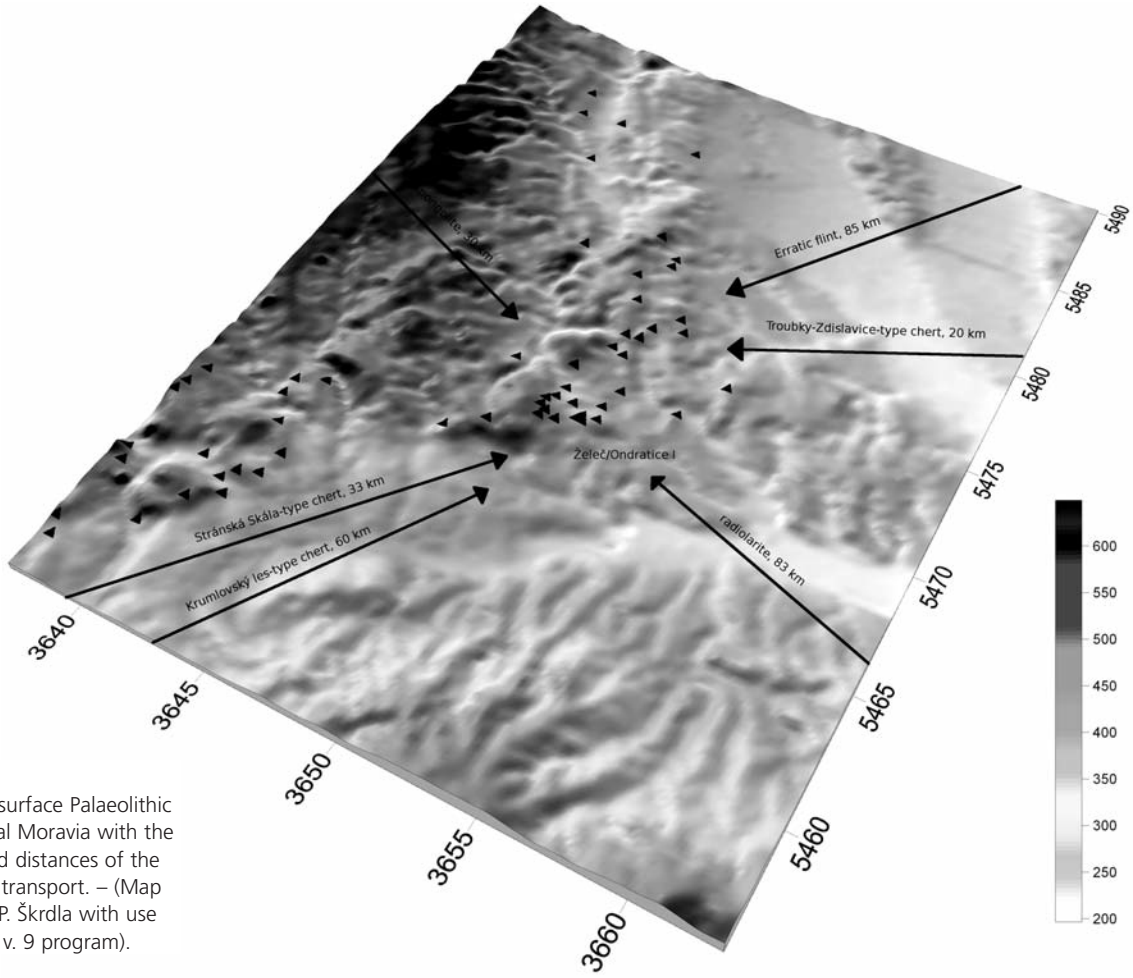

Fig. 3 The surface Palaeolithic sites in central Moravia with the directions and distances of the raw material transport. – (Map O. Mlejnek / P. Škrdla with use of the Surfer v. 9 program).

In some cases, where an artefact has been recently broken, it is possible to distinguish two varieties – black Maastrichtian flint and yellowish-brown Danian chert containing relics of bryozoans (moss animals). However, most of the flint objects are completely covered with a white patina, which complicates the raw material determination. Therefore, we have created a special category of »erratic flint?« (3%), and have placed into it all artefacts made of high quality material completely covered by a white patina. The most of them are very probably erratic flints, but there may be some pieces made of high quality varieties of Moravian cherts coming from Stránská skála hill or Krumlovský les highland.

The proportion of Stránská skála-type (9%) and Krumlovský les-type cherts (8%) are interestingly high. In the latter one we have not distinguished varieties because of the patina. As mentioned above, isolated small pebbles of Krumlovský les-type chert are found in local gravel; therefore, their origin need not be necessary directly connected with outcrops in the Krumlovský les region. On the contrary, because of the high ratio of Stránská skála-type chert in the assemblage we must account for some level of contact with outcrops discovered at Stránská skála hill in Brno. The Krumlovský les area is about 60 km and the Stránská skála hill is about 33 km distant from the studied site.

The Troubky-Zdislavice-type chert component of the assemblage (8%) comes unsurprisingly as the outcrops, though 20 km distant, are visible from the site. Another raw material, honey coloured and sometimes pink spongolites comprise 6.5% of the collection. This type of chert probably originates from gravels, eroded from the Upper Cretaceous sediments that originally covered a significantly larger area than today. Primary outcrops of this raw material are situated near Bořitov (okr. Blansko) in Malá Haná valley about 30 km west from the Ondratice I/Želeč site.

Smaller quantities of raw materials include radiolarite (2%). We suppose that the most high quality radiolarite was imported from the Vršatské Podhradie area (near the Vlára Pass at the Moravian-Slovakian border, White Carpathians Mountains) from a distance of 83 km. Lower quality radiolarite with pebble cortex probably originates from gravels of the Carpathian foredeep. Yellowish chalcedony geest (0.5%) and quartz (0.3%) are rare. One artefact was made of a raw material reminding révaite – a special type of silicified claystone used for decorative purposes in the present time (Přichystal 2009, 80-81) – and another one was made of some indifferent kind of quartzite.
We can conclude that the spectrum of raw materials in Ondratice I/Želeč is very diverse. Although some raw materials are found in the vicinity, others originate at some distance, illustrative of long-distance supply (see **fig. 3**). The diversity in the raw material composition is more characteristic of an Upper Palaeolithic assemblage than that of a Middle Palaeolithic.

TECHNOLOGY

Looking at technological categories, debitage (77%) is more common than cores (7%), which were more numerous among the orthoquartzite artefacts, and angular shatter (16%) (**fig. 9b**). Flakes are more common than blades, but not so markedly, as one would expect in an assemblage from the beginning of the Upper Palaeolithic. The share of blades is 30%, and in the case of high quality cherts it is even more; e. g. the blades (57.5%) are even more common than flakes among the artefacts made of erratic flint.
As a result of the surface origin of the assemblage (influenced by frost and plough damage), the material is fragmentary. Within the debitage only 32% are complete artefacts, among the blades only 15%. Proximal fragments (29%) dominate over distal (22%) and mesial pieces (17%). The level of fragmentation makes technological analyses difficult.
The metrological analysis showed that the average debitage's length is 29 mm, the width 25 mm and the height 9 mm. The average dimensions of complete flakes are 33×29×10 mm and the average dimensions of complete blades are 40×19×9 mm. The average core dimensions are 44×38×27 mm.
There is, however, a significant difference between the chert and the orthoquartzite industry. While the average dimensions of chert debitage are 25×21×7 mm, the average dimensions of orthoquartzite are 36×33×11 mm.
The bulb analysis showed that conchoidal flakes with distinctive bulbs of percussion dominate over other types (Andrefsky 2005, 25). In some cases a bulb is less distinctive. Bending flakes and blades with rims and bipolar flakes are rare. This evidences the use of hard hammer and direct percussion, and is supported by the butt analysis (**fig. 9d**). Flat butts (53%) dominate over prepared butts (20%). Point butts (13%) occur more often with artefacts made of high quality material. Dihedral (9%) and cortical (6%) butts are rare. The results of the analysis of the termination types are presented in a graph (**fig. 9c**).
It is interesting that Levallois products are evident in the debitage – 5.6% of flakes and blades were made using Levallois concepts (**fig. 5, 5-12**). The highest percentage of Levallois artefacts consist of Stránská skála-type chert (13.4%), which might be evidence of the contact with the Bohunician at Stránská skála hill in Brno. However, some Levallois products were made from Krumlovský les-type chert (10.9%), MJC (6.9%) and orthoquartzite (5%). Flakes are the most numerous Levallois artefacts (69.2%), along with points (20.5%) and blades (10.3%). Levallois points consist of Stránská skála-type chert (3 pieces), MJC (3 pieces), Krumlovský les-type chert (1 piece), and erratic flint (1 piece). They are small and bear no evidence of bidirectional reduction. They do not resemble the elongated Levallois points which are typical of the Bohunician from Stránská skála hill or Bohunice (e. g. Svoboda / Škrdla 1995; Škrdla 1996; Škrdla 2003). However, the similar results were obtained from the surface collection from the Tvarožná-Za školou

core type	no.	%	tested	precore	core	exploited
prismatic one platform	27	45	4	3	12	8
prismatic two platforms	4	6.67	1	0	2	1
prismatic with changed orientation	3	5	0	0	1	2
discoid	3	5	0	0	3	0
Levalloisian	3	5	0	0	2	1
irregular	12	20	2	0	7	3
core tool	8	13.33				
total	60	100	7	3	25	15

Tab. 1 Core types according to shape and core exploitation.

site (okr. Brno-venkov), where, on the contrary to the stratified assemblage, no complete Levallosian points were collected (cf. Škrdla 2007; Škrdla et al. 2009).

Cores, at 6.59%, are not very well represented in the assemblage (tab. 1). Most are made of local raw material (orthoquartzite and MJC) and manufactured directly at the site (figs 6, 1-4; 8, 1-2. 4). High quality raw materials (erratic flint) were used very economically. There are just three cores made of erratic flint and all of them are absolutely exploited. Therefore, the technology study concentrates more on the local orthoquartzite and MJC. Prismatic cores with one platform are the most numerous (27 pieces), followed by others of irregular shape (12 pieces). Other core types are rare. Four artefacts are opposed directional prismatic cores with two platforms. Examples with changed orientation, Levallois cores and discoid cores are represented by three artefacts each.

TYPOLOGY

For the typological analysis we used the classification system based on the French terminology of de Sonneville-Bordes / J. Perrot (1953). This system was enriched by two new types – convergently retouched (Mousterian) point and combination burin-splitter piece (see tab. 2). Non-retouched Levallois products were not included among tools, but among debitage (for their analysis see above).

We managed to distinguish 124 tools (13.6% of the assemblage), 43 locally retouched flakes, 14 locally retouched blades and 9 locally retouched pieces of angular shatter. It has been shown that the ratio of tools made of high quality raw material is higher than that of tools of low quality materials. In the orthoquartzite industry one in every 16 analysed artefacts is a tool. With erratic flint the ratio is one in five. Orthoquartzite, spongolite and Troubky-Zdislavice-type chert also have a low proportion of tools. A higher ratio of tools is found in the assemblage Krumlovský les-type and Stránská skála-type cherts, erratic flint, MJC and radiolarite. While cherts were used mainly for the production of the Upper Palaeolithic tools (end-scrapers, burins), side-scarpers dominate among tools made of orthoquartzite.

The typological spectrum of the assemblage is presented in a list of types (tab. 2). End-scrapers dominate over burins (IG = 22.6 > IB = 15.3). Included among end-scrapers there are low blade and flake end-scrapers as well as steep end-scrapers (fig. 4, 1-16). One of these high end-scrapers can be described as an Aurignacian-like carinated end-scraper (*grattoir caréné*) (fig. 4, 7). Other Aurignacian type end-scrapers include less typical high end-scrapers as well as low and high nosed end-scrapers assemblage. There is one double end-scraper (fig. 4, 11). Most are made of Krumlovský les-type and Stránská skála-type cherts, and a few consist of MJC. Erratic flint, Troubky-Zdislavice-type chert, radiolarite and orthoquartzite are represented by one piece each.

The most numerous burin type in the assemblage are indistinctive burins on broken blades and flakes (10 pieces; figs 4, 18; 8, 6). There are only three examples of truncated and three examples of dihedral

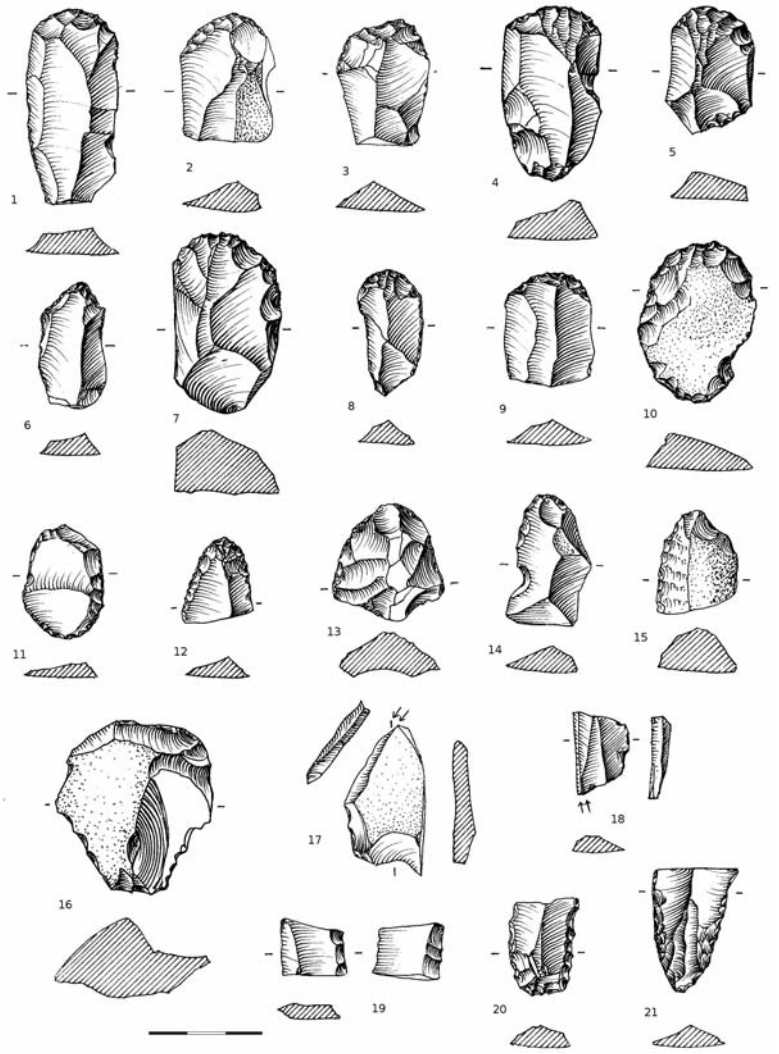

Fig. 4 Ondratice I/Želeč (okr. Prostějov/CZ). Selected artefacts: **1-16** end-scrapers. – **17-18** burins. – **19-21** retouched blades. – 1-3. 5. 8-9. 11. 13 Krumlovský les-type chert; 4. 10. 12. 18-19. 21 erratic flint; 6-7. 14. 17 Stránská skála-type chert; 15. 20 Troubky-Zdislavice-type chert; 16 radiolarite. – (Drawings L. Dvořáková). – Scale 1:2.

burins (**figs 4, 17; 5, 15; 6, 8**). Finally, we managed to distinguish one core burin. The presence of two polyhedral burins, which are common in the Aurignacian, suggests the possibility of contamination by the Aurignacian/Epiaurignacian industry, known e. g. from the nearby site of Ondratice II-Zadní Hony.

Retouched blades are numerous in Ondratice I/Želeč (20.97%). Most are fragmented, suggesting that these pieces were originally part of another tool type, such as end-scrapers or burins (**fig. 4, 19-21**). Blades with one retouched edge prevail over exemplars with two retouched edges. There was also one transversely truncated blade and two mesial fragments of Aurignacian-type steeply retouched blades made of erratic flint and MJC. These were alternately retouched (**fig. 4, 19**).

Points are primarily represented by flat retouched tools, although there was also one point on a retouched blade (**fig. 5, 14**) and two borers (which could be classified as points) assemblage (**fig. 5, 13**). An outstanding artefact is a 55 mm long leaf point with pointed basis made of white patinated erratic flint (**fig. 5, 1**). Apart from this piece, there were some fragments of bifacially worked artefacts. One is a mesial fragment of a Stránská skála-type chert leaf point (**fig. 5, 3**), and a second is a fragment of a biface made of Krumlovský les-type chert (**fig. 5, 2**). There were four unifacial flat retouched tools in the assemblage. One was probably an unfinished flat retouched leaf point of Stránská skála-type chert. Another was a fragment of an unifacially retouched leaf point of orthoquartzite (**fig. 8, 5**). Two artefacts were classified as pieces of

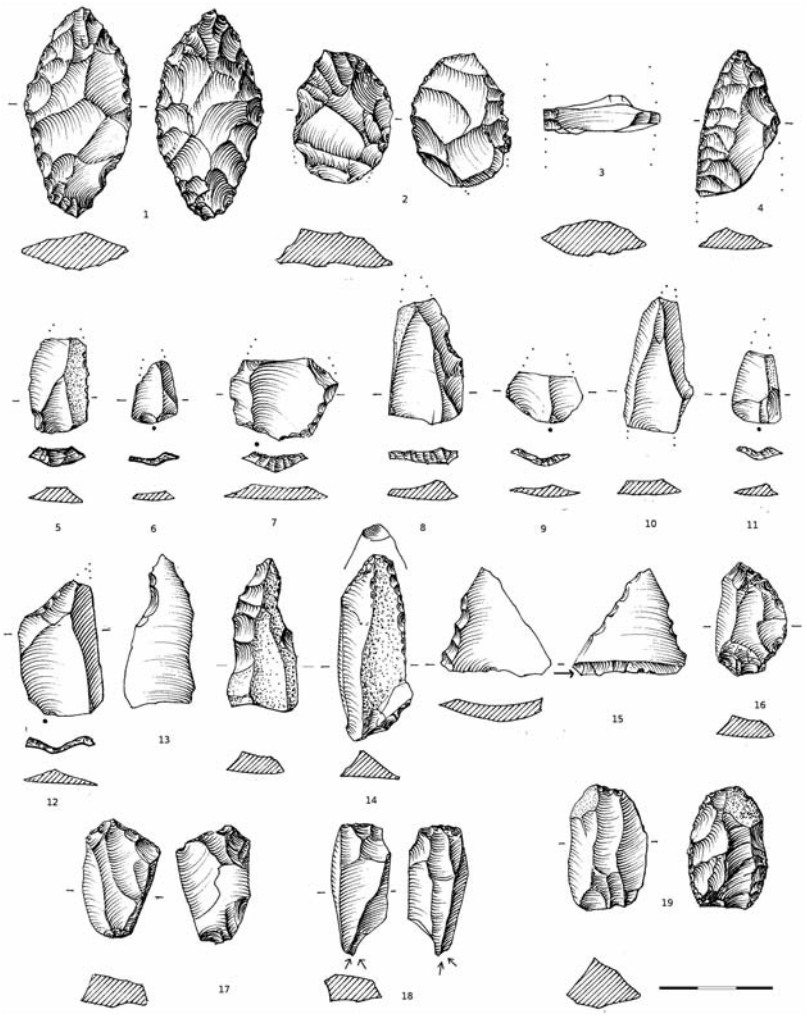

Fig. 5 Ondratice I/Želeč (okr. Prostějov/CZ). Selected artefacts: **1-3** leaf points. – **4** Jerzmanowice point. – **5-12** Levallois debitage. – **13** borer. – **14** blade points. – **15** burin. – **16** side-scraper. – **17. 19** splitter pieces. – **18** splitter piece-burin. – 1. 4-6. 9. 11. 18 erratic flint and chert; 2. 8. 19 Krumlovský les-type chert; 3 Stránská skála-type chert; 7. 10. 12. 16-17 Moravian Jurassic chert; 13 spongolite; 14 Troubky-Zdislavice-type chert; 15 radiolarite. – (Drawings L. Dvořáková). – Scale 1:2.

Jerzmanowice points made from Stránská skála-type chert and erratic flint (fig. 5, 4). Jerzmanowice points also predominate over leaf points at Ondratice Ia (Oliva 2004, 67).

The archaic-like industry is represented mainly by side-scrapers (14.5%) and notches (5.7%), which are numerous in the orthoquartzite component of the assemblage (figs 5, 16; 6, 6-7). Among side-scrapers made of orthoquartzite and MJC, single convex side-scrapers on flakes are predominant; some of them have large dimensions (fig. 7). Other types are rare (double side-scraper, Quina type side-scraper). Denticulate artefacts are represented by two pieces. The only point on a convergently retouched flake (Mousterian point) was made of erratic flint.

Splintered pieces (8%), mostly of chert, evidence possible bone manufacturing directly at the site (fig. 5, 17. 19). Three of these are made in a combination with a burin (fig. 5, 18).

DISCUSSION

The assemblage from the surface site at Ondratice I/Želeč is one of the largest Moravian Palaeolithic surface collections, which makes the analysis representative in regard to the sufficient number of examined artefacts. The main research question is whether it is possible to work with the entire assemblage as homoge-

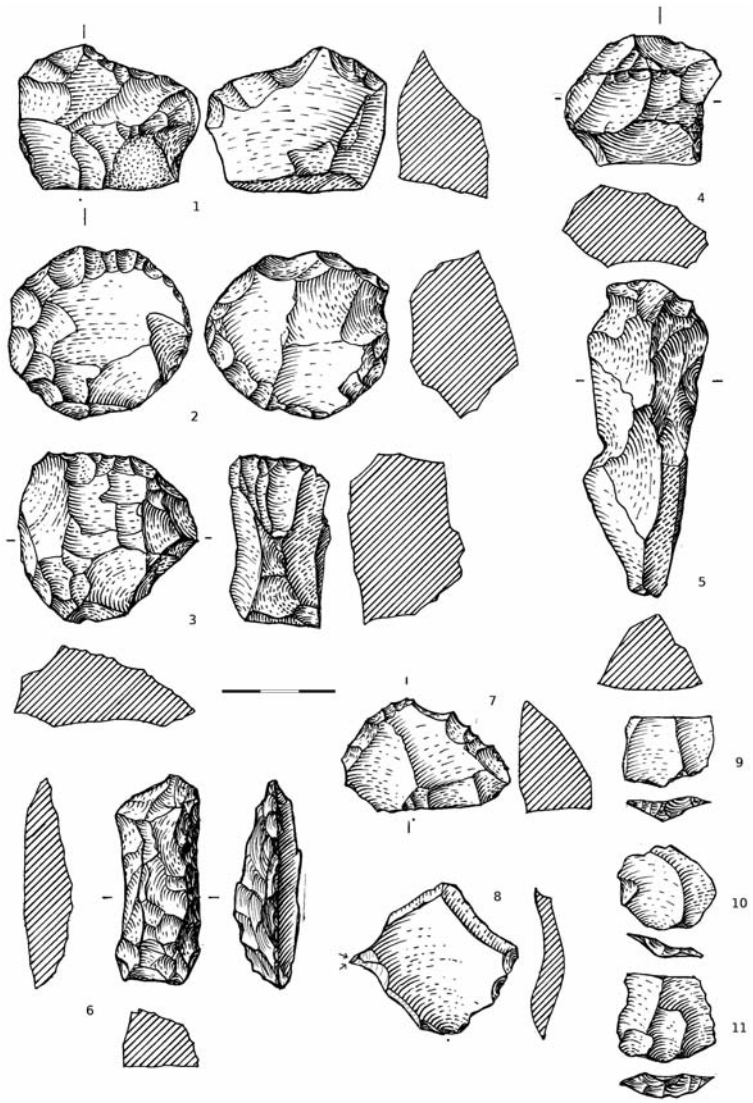

Fig. 6 Ondratice I/Želeč (okr. Prostějov/CZ). Selected artefacts: **1. 6-7** side-scrapers. – **2-4** cores. – **5** crest blade. – **8** burin. – **9-11** Levallois flakes. – 1-3. 5-11 quarzite; 4 radiolarite. – (Drawings L. Dvořáková). – Scale 1:2.

nous, or we should consider that this a polycultural site or a palimpsest. Some authors separated the orthoquartzite and chert components of the collection (cf. Svoboda 1980a; Oliva 2004), because some observers during pre-war and wartime excavations noted that it was possible to distinguish two layers: a lower one contained mainly orthoquartzite industry and an upper one where chert artefacts were predominant (Valoch 1967, 14). This approach has to be rejected because the local easily accessible orthoquartzite was evidently manufactured throughout prehistory. This is supported by finds from other surface sites in the surrounding area, such as the assemblage from the Epiaurignacian site at Ondratice II-Zadní Hony (Valoch 1975; Oliva 1987, 32).

There are several arguments for the polycultural nature of the collection from Ondratice I/Želeč. The site is at a favourable location with a good view over the valley, which must have attracted hunters from all periods of the Upper Palaeolithic. The technological and typological composition of the assemblage evidences Szeletian (flat retouched tools), Bohunician (Levallois concepts) and Aurignacian-like (steeply retouched tools) components. However, the collection is similar in composition to those from other Moravian Palaeolithic sites. Unfortunately, we do not have a similar assemblage from a stratified context. Nerudová (1999, 28; 2003, 80) called this kind of industries as »Szeletian of Levallois tradition« in a new different meaning of this term. This term was originally used by Valoch for the type of industry which is

type no.	type	no.	%
1	end-scraper on a blade/grattoir sur bout de lame	5	4.03
2	atypical end-scraper on a blade/grattoir sur bout de lame atypique	4	3.23
3	double end-scraper/grattoir double	1	0.81
4	pointed end-scraper/grattoir ogival	0	0
5	end-scraper on a retouched blade/grattoir sur lame retouchée	1	0.81
6	end-scraper on a Aurignacian blade/grattoir sur lame aurignacienne	0	0
7	fan-like end-scraper/grattior éventail	0	0
8	end-scraper on a flake/grattoir sur éclat	5	4.03
9	round end-scraper/grattoir circulaire	0	0
10	unguiform end-scraper/grattoir unguiforme	0	0
11	carinated end-scraper/grattoir caréné	1	0.81
12	atypical carinated end-scraper/grattoir caréné atypique	6	4.84
13	nosed high end-scraper/grattoir à museau épais	2	1.61
14	nosed flat end-scraper/grattoir à museau plat	3	2.42
15	core end-scraper/grattoir nucléiforme	0	0
16	plane/rabot	0	0
17	end-scraper – burin/grattoir – burin	0	0
18	end-scraper – point/grattoir – pointe	0	0
19	burin with truncation/burin – troncature retouchée	0	0
20	borer with truncation/percior – lame tronquée	0	0
21	borer – end-scraper/perçoir – grattoir	0	0
22	borer – burin/perçoir – burin	0	0
23	borer/perçoir	0	0
24	atypical borer, bec/bec	2	1.61
25	multiple borer/percoir multiple	0	0
26	microborer/micropercior	0	0
27	central dihedral burin/burin dièdre droit	1	0.81
28	curved dihedral burin/burin dièdre déjeté	0	0
29	lateral dihedral burin/burin dièdre	2	1.61
30	burin on a break/burn d´angle sur cassure	10	8.06
31	multiple dihedral burin/burin multiple dièdre	0	0
32	busqed burin/burin busqué	2	1.61
33	burin on a borer/burin bec-de-peroquet	0	0
34	burin on a transversal truncation/burin sur troncature retouchée droite	1	0.81
35	burin on a oblique truncation/burin sur troncature retouchée oblique	2	1.61
36	burin on a concave truncation/burin sur troncature retouchée concave	0	0
37	burin on a convex truncation/burin sur troncature retouchée convexe	0	0
38	tranversal burin/burin transverse sur troncature latérale	0	0
39	tranversal burin on a notch/burin transverse sur encoche	0	0
40	multiple burin on a truncation/burin multiple sur troncature retouchée	0	0
41	mixed multiple burin/burin multiple mixte	0	0
42	burin of the Noailles type/burin de Noailles	0	0
43	core burin/burin nucléiforme	1	0.81
44	flat burin/burin plan	0	0
45	point of the Abri Audi type/couteau de l´abri Audi	0	0
46	point of the Châtelperron type/pointe de Châtelperron	0	0
47	atypical point of the Châtelperron type/pointe de Châtelperron atypique	0	0
48	point of the la Gravette type/pointe de la Gravette	0	0
49	atypical point of the la Gravette type/pointe de la Gravette atypicque	0	0
50	microgravette/microgravette	0	0
51	point of the des Vachons type/pointe des Vachons	0	0
52	point of the Font-Yves type/pointe de Font-Yves	0	0
53	truncated blade with a outshot/pièce gibbeuse à bord abattu	0	0
54	dart/fléchette	1	0.81
55	hafted point/pointe à soie	0	0
56	shouldered point/pointe à cran atypique	0	0
57	notched blade/pièce à cran	0	0
58	backed blade/lame à bord abattu total	0	0
59	partly backed blade/lame à bord abattu partiel	0	0
60	transversaly truncated blade/lame à troncature retouchée droite	1	0.81
61	oblique truncated blade/lame à troncature retouchée oblique	0	0
62	concave truncated blade/lame à troncature retouchée concave	0	0
63	convexe truncated blade/lame à troncature retouchée convexe	0	0
64	double truncated blade/lame bitronquée	0	0
65	unilateraly retouched blade/lame à retouches continues sur un bord	18	14.52
66	bilateraly retouched blede/lame à retouches continues sur deux bords	5	4.03
67	steeply retouched Aurignacian blade/lame aurignacienne	1	0.81
68	steeply retouched notched blade/lame à étranglement	1	0.81
69	flat retouched point/pointe à face plane	4	3.24
70	laurel leaf point/feuille de laurier	2	1.61
71	willow leaf point/feuille de saule	1	0.81
72	shouldered leaf point/pointe à cran typique	0	0
73	pic/pic	1	0.81
74	notch/encoche	7	5.65
75	denticulate/denticulé	2	1.61
76	splitter/esquillé	7	5.65
77	side-scraper/racloir	18	14.52
78	raclette/raclette	0	0
79	triangle/triangle	0	0
80	rectangle/rectangle	0	0
81	trapeze/trapèze	0	0

Tab. 2 List of types with selected typological indexes.

type no.	type	no.	%
82	rhomb/rhombe	0	0
83	circle segment/segment de cercle	0	0
84	truncated bladelet/lamelle tronquée	0	0
85	backed bladelet/lamelle à dos	0	0
86	backed truncated bladelet/lamelle à dos tronquée	0	0
87	backed denticulated bladelet/lamelle à dos denticulée	0	0
88	denticulated bladelet/lamelle denticulée	0	0
89	notched bladelet/lamelle à coche	0	0
90	Dufour- type bladelet/lamelle Dufour	0	0
91	Azilian-type point/pointe azilienne	0	0
92	various/divers	2	1.61
93	splitter-burin/esquillé – burin	3	2.42
94	Convergently retouched (Mousterian-type) point/pointe moustérienne	1	0.81
	total	124	100

index	index explanation	no.	%
IG	share of end-scrapers among tools	28	22.58
IGA	share of Aurignacian types of end-scrapers among tools	12	9.68
iGA	share of Aurignacian types of end-scrapers among end-scrapers	12	42.86
IGC	share of high end-scrapers among tools	9	7.26
iGC	share of high end-scrapers among end-scrapers	9	32.14
IGM	share of nosed end-scrapers among tools	5	4.03
iGM	share of nosed end-scrapers among end-scrapers	5	17.86
IB	share of burins among tools	19	15.32
IBA	share of Aurignacian types of burins among tools	2	1.61
iBA	share of Aurignacian types of burins among burins	2	10.53
ILr	share of retouched blades among tools	26	20.97
IPf	share of flat retouched points among tools	7	5.65
IE	share of splitters among tools	10	8.06
IR	share of side-scrapers among tools	18	14.52
IOC,M	share of combined and multiple tools among tools	4	3.23
IOLam	share of tools on blades among tools	63	50.81
ION	share of tools on cores and fragments among tools	13	10.48
IOLev	share of tools on Levalloisian debitage	4	3.23

Tab. 2 Continuation.

now called the Bohunician (Valoch 1964). Therefore, it would be more appropriate to refer to the Ondratice-type industry if looking for a different term. However, the first step is to prove that it is not just a random mixture of industries of different periods. This can be definitively examined by an archaeological excavation of a stratified site with this type of industry.

After a comparison of similar industries to the assemblage from Ondratice I/Želeč (**tab. 3**) it seems that the most similar is that of Ondratice Ia analysed by Oliva (2004). One difference is the small number of orthoquartzite artefacts in Ondratice Ia, which, moreover, were excluded from the analysis by Oliva for no apparent reason. The question is whether the small ratio of orthoquartzite artefacts is the result of collectors focusing on chert and flint objects, or was caused by the dearth of orthoquartzite artefacts at the site. Another difference is the low number of Stránská skála-type chert in the Ondratice Ia assemblage. Only three Levallois products and one side-scraper were made of this material (Oliva 2004, 63). The small number of Levallois products (4 of 1072 artefacts) could relate to the few pieces of Stránská skála-type chert and orthoquartzite. In other aspects, such as the number of end-scrapers, retouched blades or splintered pieces, the Ondratice Ia assemblage resembles the central site at Ondratice I/Želeč, although there is a lower number of burins and more side-scrapers and bifaces in Ondratice Ia. Generally, the Ondratice Ia assemblage resembles the Szeletian more than our collection (more flat retouched tools and side-scrapers, less Levallois products).

Nerudová (2000) analysed some assemblages from the sites in the surrounding area, such as Drysice I-Kluče, Drysice III-Žlíbky (okr. Vyškov) and Ondratice IV-Syrovátky (**fig. 2**). These localities were discussed by Valoch earlier (1967; 1983). Nerudová did not separate the orthoquartzite component of the industry, which forms a significant share of these assemblages. The exact numbers of raw materials (except local orthoquartzites) used in Drysice I and Ondratice IV were published by Přichystal (2000). The raw material composition at these localities seems to be similar to that at the Ondratice I/Želeč site. Typologically, all these assemblages resemble the industry from the studied site Ondratice I/Želeč, although they differ in particular aspects. According to Nerudová the Levallois concepts are absent in Ondratice IV-Syrovátky. On

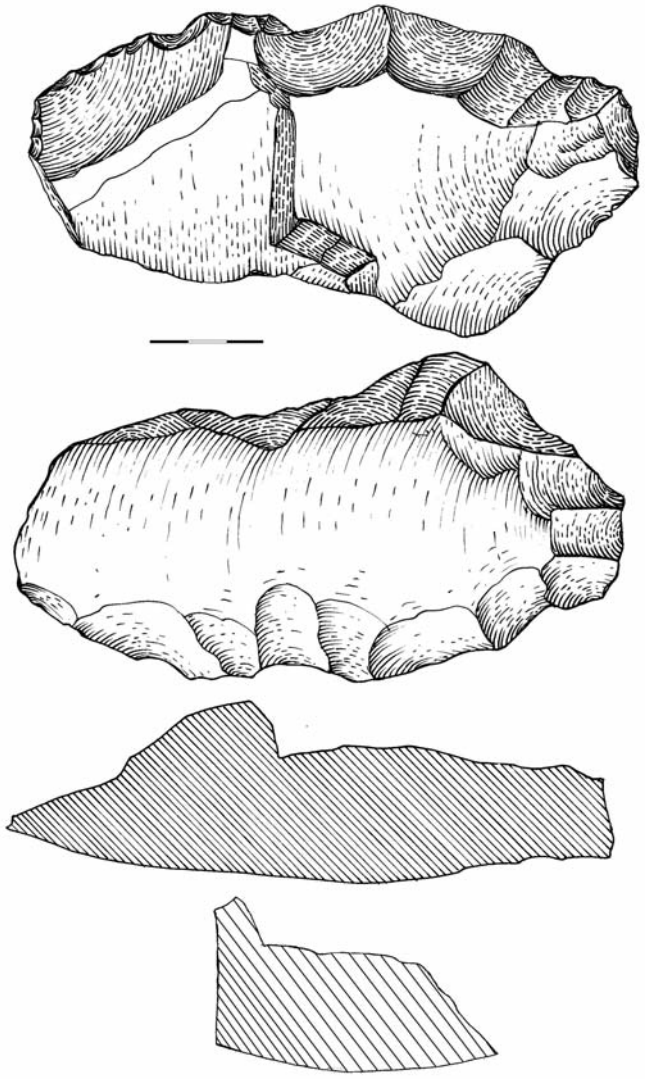

Fig. 7 Ondratice I/Želeč (okr. Prostějov/CZ). A large orthoquartzite side-scraper. – (Drawing L. Dvořáková). – Scale 1:2.

the other hand this concept is present at both other sites (8.6% in Drysice I and 9.3% in Drysice III; Nerudová 2000, 17). Mlejnek revised the collection from these localities and found out that this result was caused by the fact that Nerudová did not include the Levallois products from the Ondratice IV site into her analysis. The number of burins is lower and the number of side-scrapers is higher at all satellite sites; therefore, these assemblages look more archaic. The minimal number of retouched blades is interesting. The ratio of flat retouched tools differs, from 1.7% at Ondratice IV up to 8.7% in Drysice I. Also the ratio of blades differs a lot, particularly in the assemblages in Ondratice IV (20.2%), Drysice I (18.7%) and III (42.6%). The collection of Drysice III is the most similar to the Ondratice I/Želeč site, while the other two assemblages look more archaic.

Other similar collections originate from sites in the Bobrava valley located in the southern direction from Brno (see **fig. 1**), such as Ořechov I and II (okr. Brno-venkov) and Želešice I and III (Valoch 1956; Valoch 1961; Nerudová 1999; Škrdla et al. in print). The largest assemblage comes from Ořechov I, which has been recently analysed by Nerudová (1999). This collection is one of the most similar to the Ondratice I/Želeč industry. Levallois products are better represented here than at the Ondratice I/Želeč site (ILev = 7.3). Though, there is a lower share of flat retouched points in the Ořechov I assemblage (IPf = 4.4). Because of these facts, this collection was identified as Bohunician (Nerudová 1999, 28; Svoboda et al. 2002, 140) and less often as Szeletian (Oliva 1992, 40). Levallois points dominate over leaf points (88 to 48). End-scrapers are more numerous than burins, and the most numerous tool type are side-scrapers. The share of retouched blades and splitter pieces is lower than in Ondratice I/Želeč. The smaller assemblages from the sites in the surrounding area (Ořechov II, Želešice I and III) have a lower proportion of Levallois products and because of the higher number of side-scrapers they look more archaic.

The last mentioned region with a similar industry is situated in the area around Mohelno in western Moravia (okr. Třebíč; see **fig. 1**). It is particularly important to point to the richest assemblage, which comes from the site of Mohelno-Boleniska (Oliva 1986a; Škrdla 1999). This collection is not as numerous as in the previously mentioned localities and therefore statistical methods have not been applied there (Škrdla 1999, 45). While Oliva (1986a, 39-43) identified this industry as Szeletian, Škrdla (1999, 46) reported the site as Bohunician with a strong Szeletian influence. In regard to raw materials, Krumlovský les-type chert is predominant at Mohelno-Boleniska, radiolarite and Stránská skála-type chert appear rarely (Škrdla 1999, 45). The typological spectrum is dominated by a series of leaf points. Side-scrapers are numerous as well, and some are flat retouched. Products of Levallois concepts are also present.

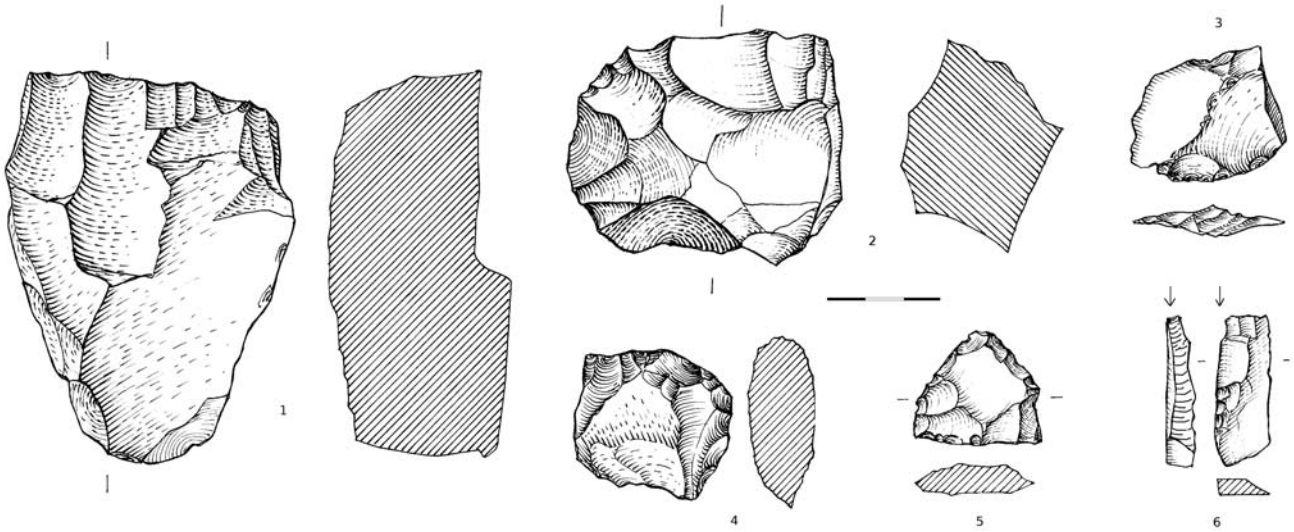

Fig. 8 Ondratice I/Želeč (okr. Prostějov/CZ). Selected artefacts: **1. 2. 4** cores. – **3** Levallois flake. – **5** fragment of an unifacially flat retouched point. – **6** burin. – 1-2. 4-6 orthoquartzite; 3 silicified siltstone. – (Drawings L. Dvořáková). – Scale 1:2.

index	index explanation	Ondratice I	Ondratice Ia	Ondratice IV	Drysice I	Drysice III	Ořechov I
IG	share of end-scrapers among tools	22.58	22.4	18.29	15.3	16.94	15.5
IGA	share of Aurignacian end-scrapers among tools	9.68	5.8	5	3.65	5.34	4.06
iGA	share of Aurignacian end-scrapers among end-scrapers	42.86	27.91	20	19.51	22.58	26.19
IGC	share of high end-scrapers among tools	7.26		1.67	3.2	2.29	3.87
iGC	share of high end-scrapers among end-scrapers	32.14		7.14	17.07	9.68	25
IGM	share of nosed end-scrapers among tools	4.03	0.52				1.11
iGM	share of nosed end-scrapers among end-scrapers	17.86	2.86				7.14
IB	share of burins among tools	15.32	5.21	10.97	8.21	4.92	3.87
IBA	share of polyhedral burins among tools	1.61		0	1.37	2.29	1.01
iBA	share of polyhedral burins among burins	10.53		0	13.64	33.33	26.19
ILr	share of retouched blades among tools	20.97	22.92	0	2.74	2.29	2.68
IPf	share of flat retouched points among tools	5.65	10.71	1.67	8.68	7.63	4.43
IE	share of splitters among tools	8.06	7.81	12.2	1.87	4.37	2.58
IR	share of side-scrapers among tools	14.52	18.23	23.17	28.73	25.14	19.1
IOC,M	share of combined and multiple tools among tools	3.23	6.25	1.22	5.6	3.28	3.23
IOLam	share of tools on blades among tools	50.81	47.44				
IOÉcl	share of tools on flakes among tools	38.72	43.47				
ION	share of tools on cores and fragments among tools	10.48	7.81				
IOLev	share of tools on Levallois debitage	3.23					
ILev	share of Levallois products in debitage	5.58					7.33

Tab. 3 Comparison of selected indexes among Moravian Early Upper Palaeolitic sites of Ondratice I (this paper), Ondratice Ia (Oliva 2004), Ondratice IV (Nerudová 2000), Drysice I and III (Nerudová 2000) and Ořechov I (Nerudová 1999).

Among the Levallois points there are noted elongated pieces, which are typical of the Bohunician, as well as short and wide points. Most of them are made of the Krumlovský les-type chert. The presumption that Stránská skála-type chert was preferred for Levallois products, which was stated according to the collec-

tions from the type site of Brno-Bohunice (cf. Oliva 1986b), was not validated at this locality (Škrdla 1999, 44-45). There are other minor sites with a similar kind of industry in the surrounding area (e. g. Lhánice I and II [okr. Třebíč]; Oliva 1986a).

CONCLUSION

At the beginning of the Early Upper Palaeolithic we are able to distinguish two technological complexes in Moravia: the Bohunician and the Szeletian. They differ in the use of diverse raw materials, as well as geographically. The Bohunician hunters lived primarily in the Brno area and used local Stránská skála-type chert. The Szeletians mainly occupied the Krumlovský les area where they manufactured local Krumlovský les-type chert, and also the eastern slopes of the Drahany highland (Prostějov and Vyškov areas) where they used Drahany orthoquartzite, local cherts and imported raw materials. The first Aurignacian site appeared in Moravia during a later period after the cold phase Heinrich event 4 (e. g. Richter et al. 2009; Škrdla et al. in print); however, it was present in Lower Austria as early as the Bohunician and Szeletian in Moravia (Nigst et al. 2008).

The Bohunician industry is typified by a specific technology representing a synthesis of Middle Palaeolithic Levallois and Upper Palaeolithic blade concepts (e. g. Svoboda / Škrdla 1995; Škrdla 1996; Škrdla 2003). The resulting products are elongated Levallois points. Often there is a bidirectional reduction present. Some blades come out during the Bohunician core preparation. Apart from the Levallois points, there are end-scrapers, indistinctive side-scrapers, burins, retouched blades, splintered pieces, notches and denticulate tools. With the exception of the Stránská skála site there were some leaf points found within the Bohunician context. However, they are mostly made of a different raw material, than the otherwise predominant Stránská skála-type chert (e. g. Svoboda 1990, 201-202).

On the other hand the technique of the bifacial reduction is typical of the Szeletian. Flat retouched tools, leaf points and flat retouched side-scrapers, are the final products. Most of the cores have one platform, and are simply prepared, for flake or blade manufacturing. However, there are discoid cores present as well. Apart from bifacial tools, the Szeletian assemblage consists of end-scrapers, side-scrapers of different types, undifferentiated burins, retouched blades, convergently retouched (Mousterian) points, splitter pieces, notches and denticulate tools (e. g. Allsworth-Jones 1986; Oliva 1992; Neruda / Nerudová in print).

Aurignacian settlements appeared in Moravia later than the Bohunician and Szeletian ones (e. g. Svoboda 2003; Neruda / Nerudová in print; Richter et al. 2009, 716; Škrdla et al. in print). The Aurignacian technology is a purely Upper Palaeolithic one, based on manufacturing of blades from prismatic cores with one platform. The Aurignacian is typified by a steep retouch; steeply retouched carinated end-scrapers and at some sites polyhedral busked burins (*burin busqué*) dominate. Low or high nosed end-scrapers or shouldered end-scrapers are often found as well. On the contrary, alternately retouched blades of the Dufour type and the typical Krems points are rare in the Moravian assemblages (e. g. Oliva 1987).

The collection analysed from the surface site of Ondratice I/Želeč bears signs of all the aforementioned Early Upper Palaeolithic cultures, which is interesting. The presence of Levallois products often made from the Stránská skála-type chert is typical of the Bohunician. The Szeletian influence can be seen in the presence of flat retouched tools, mainly leaf points, Jerzmanowice points and side-scrapers. The presence of high and nosed end-scrapers and generally of the steep retouch is considered to be of Aurignacian influence. One artefact can be described as a carinated end-scraper.

In this consequence it is important to ask if this assemblage is homogenous or a heterogeneous mixture of industries of different periods. This question is difficult to answer in case of a surface collection. Similar industries come from other surface sites in Moravia (satellite sites in the surrounding area, sites in the

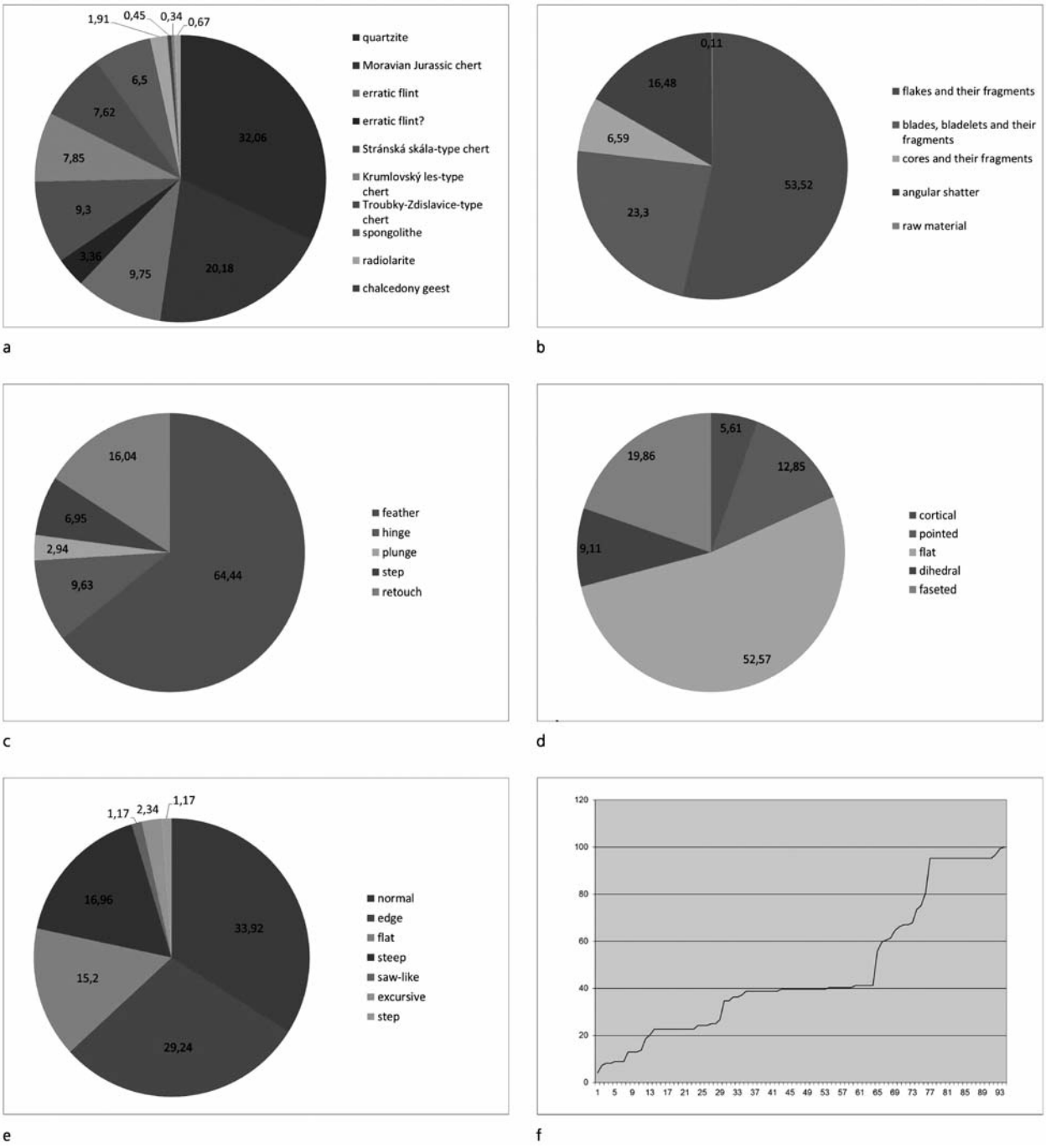

Fig. 9 Ondratice I/Želeč (okr. Prostějov/CZ): **a** raw material composition. – **b** basic technological categories. – **c** termination types. – **d** butt types. – **e** retouch types. – **f** graph of types. – (Graphs and table O. Mlejnek).

Bobrava valley, and in the Mohelno area of western Moravia), which supports the homogeneity of the assemblages. Nerudová suggested the term »Szeletian of Levallois tradition« for this kind of industry (Nerudová 1999, 28; Nerudová 2003, 80). Because of the fact that this term had been used before in different connotation (Valoch 1964), it would be more appropriate to use a different term, such as »industries of Ondratice type«. For an explicit definition of this type of industry it would be unquestionable necessary to excavate a similar stratified location.

This paper is the first publication analysing a statistically significant assemblage from the Ondratice I/Želeč site and the first publication for English speakers about this location. While this site has been well-known

for more than a century, there have been a few papers analysing the chert component of the industry. This article does not examine the entire assemblage from this site, due to the high number of collected artefacts and the difficulty of accessing assemblages held in widely scattered locations. However, we think that we have obtained a statistically significant collection in regard to a number of analysed artefacts and that even a considerable increase in number of objects would not change the perception of the general characteristics of the industry and the main conclusions of this paper.

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Zusammenfassung / Abstract / Résumé

Ondratice I/Želeč – ein frühjungpaläolithischer Fundplatz in Mittelmähren

In diesem Artikel wird das Ergebnis einer systematischen Oberflächenprospektion in Ondratice I/Želeč (Mittelmähren) diskutiert. Die Steinartefaktaufsammlung ist sowohl durch zahlreiche Stücke des Levalloiskonzeptes (Kerne, Spitzen, Abschläge, Klingen) und flächenretuschierte Objekte (Blattspitzen, Jerzmanowicespitzen, Schaber) als auch durch steilkantenretuschierte Artefakte (Kratzer, retuschierte Klingen) charakterisiert. Diese verschiedenen Gerätetypen und Grundformen bzw. Abfallprodukte sind generell typisch für drei unterschiedliche mitteleuropäische Technokomplexe am Übergang vom Mittel- zum Jungpaläolithikum – nämlich Bohunicien, Szeletien und Aurignacien. Die Mischung charakteristischer Steinartefakte dieser drei Technokomplexe in Ondratice I/Želeč kann möglicherweise damit erklärt werden, dass sie auf der Oberfläche gefunden wurden, und somit ein vermischtes Inventar repräsentieren. Jedoch werden auch aus anderen Teilen Mährens derartige Oberflächeninventare beschrieben. Für ein besseres Verständnis und für eine Datierung solcher Steinartefaktvergesellschaftungen ist letztlich die Ausgrabung eines stratifizierten Platzes notwendig.

Ondratice I/Želeč – an Early Upper Palaeolithic site in Central Moravia

The Ondratice I/Želeč site represents one of the most important Early Upper Palaeolithic localities in central Moravia. This site has been studied since the late 19th century and the surveys continue up to the present. A recently obtained lithic assemblage (collected during 2009-2011) is characterised by the Levallois industry (cores, points, flakes, blades), together with flat retouched artefacts (leaf and Jerzmanowice points, side-scrapers) and steeply retouched objects (end-scrapers, retouched blades). These tools are typical of three different cultures in Central Europe – the Bohunician, Szeletian and Aurignacian. The mixture of finds characteristic of three different Early Upper Palaeolithic cultures may relate to the surface origin of the assemblage. However, similar assemblages are described in different parts of Moravia. In order to understand and date these lithics better it will be necessary to excavate a stratified site.

Ondratice I/Želeč – un site archéologique de Paléolitique supérieur en Moravie centrale

Ondratice I/Želeč est l'un des sites les plus importants pour le Paléolithique supérieur de Moravie centrale. Il fait l'objet de recherches depuis la fin du 19^{e} siècle et les sondages continuent jusqu'à présent. La collection lithique récemment obtenue (campagnes de 2009 à 2011) est caracterisée par l'industrie Levalloise (nucléus, pointes, éclats, lames), ensemble avec les artefacts plats rétouchés (les pointes foliacés, les pointes de Jerzmanowice, les racloirs) et les objets fortement retouchés (les grattoirs, les lames à retouches). Ces types des outils sont caractéristiques pour les trois cultures différentes en Europe centrale – la culture bohunicienne, szeletienne et aurignacienne. Le mélange d'outils caractéristiques pour les trois cultures différentes du Paléolithique supérieur peut être causé par le contexte de découverte en surface de la collection. Toutefois, des collections similaires sont décrites dans les autres parties de la Moravie. Pour mieux connaître ces assemblages lithiques et pour les dater il faudrait fouiller un site stratifié.

Schlüsselwörter / Keywords / Mots clés

Tschechische Republik / Mittelmähren / Paläolithikum / Oberflächenprospektion / Bohunicien / Szeletien
Czech Republic / Central Moravia / Palaeolithic / surface survey / Bohunician / Szeletian
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