

POLAND

Because in the volume of *Bilan quinquennal* covering the period 2006-2011 there were no contributions on research made in Upper Palaeolithic in Poland in the present volume we report on the progress of UP studies made in 2006-2013. In this period the investigation was concentrated mainly on Gravettian and Magdalenian sites – both the excavation work and the post-excavation analyses.

Publications

The volume *Wylotne and Zwierzyniec: Paleolithic sites in Southern Poland* / ed. by S.K. Kozłowski published in 2006 dedicated mainly to the analysis of artefact collections from past excavation at the Wylotne Rockshelter and Kraków Zwierzyniec includes chapters focused on inventories from Jerzmanowician and Aurignacian sites (Mańka, 2006; Jarosińska 2006). In the same period synthetic works on transitional cultures were also published (Kozłowski and Otte, 2007; Kozłowski 2010). Also in 2007 a monograph of the Middle and Early Upper Palaeolithic site Piekary IIa was published, where a detailed description of the EUP layer 6 assemblage and decorated ochre crayons is included (Sitlivy *et al.*, 2007).

In 2007 the new volume of *Folia Quaternaria* concentrated on research carried out at Kraków Spadzista, trench B+B1, with chapters reporting on a detailed geological analysis and taphonomy of mammoth bone accumulation (Kalicki *et al.*, 2007), the technology and typology of the Gravettian and Epigravettian lithic assemblages discovered in trench B+B1 (Wilczyński 2007), and the microwear analysis of burins (Stefański 2007). The same period brought a number of synthetic studies on the Gravettian and Upper Palaeolithic settlement in Poland (Kozłowski 2007; 2009) and, in 2012, a summary of the current status of research in Gravettian occupation discovered at Kraków Spadzista (Wilczyński *et al.*, 2012). Also in 2006 an analysis of an Epigravettian assemblage excavated in 1998-2000 at Piekary IIa was published (Wilczyński 2006).

In 2008 a Magdalenian child burial from Wilczyce site was published (Irish *et al.*, 2008) and a short synthesis of Magdalenian occupation in Poland (Poltowicz-Bobak 2012).

Field projects

In 2006-13 the focus of fieldwork was mostly on Gravettian and Magdalenian sites. Excavation of Gravettian sites - especially the crucial sites at Kraków Spadzista and Jaksice II – brought in a large number of diverse materials that shed new light on Mid Upper Palaeolithic occupation of southern Poland. Also excavation of a number of Magdalenian sites in Poland brought in data helpful for clarifying the chronology of this settlement.

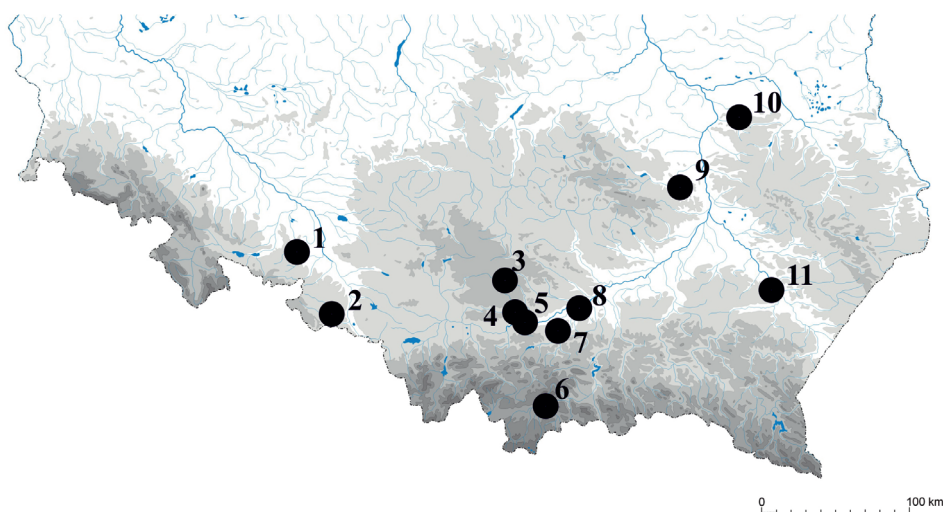


Figure 1 – Location of the sites excavated in 2006-211. (Sz - Szeletian, A - Aurignacian, MUP - Mid Upper Palaeolithic (Pavlovian?), G - Late Gravettian, E - Epigravettian, M - Magdalenian.
1 - Sowin 7 (E, M), 2 - Lubotyń 11 (Sz), 3 - Perspektywiczna Cave (A), 4 - Maszycka Cave (M) and Borsuka Cave (MUP), 5 - Kraków Spadzista (G), 6 - Oblazowa Cave (MUP), 7 - Targowisko 10 (E), 8 - Jaksice II (G), 9 - Ćmielów-Gawroniec (M), 10 - Klementowice (M), 11 - Wierzawice 31 (M).

Szeletian

In 2006-2013 only a single locality of Szeletian culture - Lubotyń 11 - was excavated. Lying in the southern part of the Glubczyce Upland this site was first recorded in early twentieth century. It was rediscovered during a field survey made by M. Gedl in 2001 and was excavated by M. Poltowicz and D. Bobak (Wilczyński 2008; Poltowicz-Bobak et al., 2009). Finds from Lubotyń 11 include a large lithic inventory discovered resting in the residues of Komorniki soil and the remains of a hearth, radiocarbon dated to around 35,000 - 44,000 years BP (Bobak *et al.*, 2013). Almost all the artefacts were of flint found in the direct vicinity of the site; the structure of the lithic inventory is typical for a camp site (Poltowicz-Bobak *et al.*, 2009). Tools were represented by forms typical for the Szeletian - most of them made on flakes. Among the retouched tools there were a few leaf points - most of them incomplete. Because of the discovery during a field survey of small but quite significant concentration of Szeletian sites in the southern part of the Glubczyce Upland the authors of the excavation have suggested that in this region we could mark another important centre of the Szeletian settlement in Central Europe which may be understood not as evidence of sporadic and short-term forays but, rather, of a more long-term, and intensive penetration of these areas (Poltowicz-Bobak *et al.*, 2009).

Aurignacian

During excavations carried out in 2012 in Perspektywiczna Cave in the valley of the Udorka River near Wolbrom (about 40 km north of Kraków), a new Aurignacian inventory was discovered (Sudol *et al.*, 2013), an assemblage of a few hundred lithic artefacts (among them, some Aurignacian carinated endscrapers). Closer technological and chronological determinations will be available only after a more comprehensive analysis of this new material.

Mid Upper Palaeolithic

Excavations in Oblazowa Cave were carried out in 2008-2009 and 2013 and helped improve our understanding of the Middle and Upper Palaeolithic layers (Valde-Nowak and Nadachowski 2013). In the course of this fieldworks, the MUP layer VIII was partly explored. The small inventory recovered included a further *Conus* shell resting at the bottom of layer VIII and associated with an unusual deposit discovered at this cave which has been interpreted as a ceremonial site (Valde-Nowak 2013).

In 2008-2010 excavations were carried out at Borsuka (Badger) Cave (Wilczyński et al., 2012). This fieldwork resulted in the discovery, in layer VI, of six deciduous teeth of a modern *Homo sapiens* infant and of 112 pendants made from the teeth of European elk and steppe wisent or aurochs (Wilczyński *et al.*, 2014). The teeth appear to belong to a 12-18 months old child. The sex of the child cannot be determined. Although no traces of a burial pit were encountered, intentional burial, the oldest known from Poland, is indicated by the presence of human remains accompanied by a large number of personal ornaments and absence of “domestic” finds, such as lithic cores, debitage and tools. An unusual presence of a larger number of pierced teeth of large herbivores in a child burial is noticeable among assorted mortuary practices recorded in MUP Central Europe. Two radiocarbon dates (about 25,000 and 27,000 years BP) secured for the pendants led us to associate these artefacts, and the human remains too, with the Gravettian technocomplex – more precisely, with the Pavlovian culture. However, pendants discovered at Pavlov I and at Dolní Věstonice I and II (Czech Republic) are mostly canines or third incisors of fox (polar and red fox) and wolf. Moreover, their manufacturing method is different than that of the Borsuka Cave specimens, which makes the culture attribution of the assemblage from Poland unclear.

Gravettian

In 2011-2013 different areas of the site at Kraków Spadzista were excavated. The fieldwork was run by the author of this article and by K. Sobczyk from the Jagiellonian

University. The excavated areas included the southern trench C2 (camp area - 2011-12), trench E1 (between trenches E and F – a workshop and a polar fox hunting area - 2012) and trench B1 (mammoth bone accumulation - 2013). Evidence from these recent excavations and geoarchaeological studies undertaken in 2011-13 helped disprove the earlier claim on the presence in trench C2 of an Epigravettian horizon dated to after the Last Glacial Maximum (LGM). The loess deposit which corresponds to the layer with Epigravettian artefacts discovered in trench B+B1, where a clearly preserved *in situ* horizon with an artefact concentration is visible (Wilczyński, 2007), rests about 1 meter higher than the Gravettian layer and lacks traces of human occupation. This information is important because of the presence in older publications of an Epigravettian episode, further supported by evidence from radiocarbon dating 17 kyr BP secured from a single bone sample. The recently made reappraisal of faunal assemblages from past and the more recent excavation has shown that the dating of this material ranges between 24 to 20 kyr BP. The presence of a radiocarbon date for a mammoth tooth of 7350 ± 35 BP is clear evidence on the contamination of the sample and could explain the presence of the younger dates among the recently obtained results. The absence of the Epigravettian layer is compatible with the findings from the study of sector C found about 2 meters from trench C2, where this layer was not observed either (Kozłowski *et al.*, 1975). Moreover, the Pavlovian occupation at Kraków Spadzista was invalidated. During the excavation of 1980 on the basis of the spatial distribution of a modest number of lithic artefacts they were identified as a Pavlovian inventory (Kozłowski and Sobczyk, 1987). However, according to the recent excavations of trench C2 this attribution must be changed. Everywhere layer 6 was strongly disturbed by solifluction, with serious consequences for the original surface of the site. The extent of this process is indicated by a significant decrease in the thickness of layer 6 exposed within the trench. The major displacement of artefacts discovered in layer 6 is demonstrated by the refittings of lithic artefacts, significantly redeposited along both the horizontal and the vertical axis. The displacement of heavier bones is evidenced by the results of radiocarbon dating of mammoth remains discovered in layer 7. Therefore, we decided that evidence is lacking to validate the recognition of a Pavlovian assemblage or other levels of human occupation in layer 6 at Kraków Spadzista. This conclusion is supported by a series of radiocarbon dates obtained for trench C2, none of which is earlier than 24,5 kyr BP, something that has been confirmed also for other trenches at Kraków Spadzista (Wilczyński *et al.*, 2012).

In 2010-13 the recently re-discovered Gravettian site Jaksice II came under excavation. The site was identified by Leon Kozłowski and Wiktor Kuźniar in 1912 (Kozłowski & Kuźniar, 1914). Unfortunately, both the archaeological and the faunal assemblages, and the information about the exact location of the site too, were lost during World War II. In late autumn of 2010, almost a hundred years after the original discovery, the location of the site was confirmed (Wilczyński & Wojtal, 2011). The new excavations at Jaksice II furnished a valuable lithic inventory and a number of interesting organic items, most notably, an ivory implement and a marine mollusc shell pendant (Wilczyński *et al.*, 2014). Four radiocarbon dates obtained from the animal remains fall within the range of ca. 24,000-20,000 ¹⁴C years BP and correspond to the age of the site at Kraków Spadzista (Wilczyński *et al.*, 2012), however, the lithic assemblage is different. The comparison of Jaksice II with Kraków Spadzista reveals evident differences, especially in the siting of the camp, the raw materials used, tool-making technologies, and the lithic typology and morphology. A characteristic feature of this tool assemblage is the absence of shouldered points (except for a single, atypical specimen) and Kostienki knives, and the high percentage of endscrapers. The presence in the backed tool group of distinctive Late Gravettian rectangles which have both their ends modified by semi-abrupt or flat retouch, always on the ventral side, is also worth noting. Given the significant differences observed in the inventories from Jaksice II and Kraków Spadzista we are inclined to interpret this dissimilarity as the result of the presence of different culture traditions within the Gravettian techno-complex in southern Poland. Unfortunately, with no record on multilayer Gravettian sites from Poland we have no way of tracing the techno-typological and chronological change which took place within the Gravettian societies residing in the region. This makes the recently investigated site at Jaksice II invaluable for improving our understanding of variability expected in

contemporaneous Gravettian occupations, not only in Poland but in Central Europe at large.

Epigravettian

New excavations were conducted at only two Epigravettian sites - Sowin 7, and Targowisko 10 discovered during rescue fieldwork.

The site Sowin 7 in south-western Poland, Opole province, was excavated in 2011-2013 (Wiśniewski *et al.*, 2012). This fieldwork was a continuation of excavations started here in 2000 (Furmanek *et al.*, 2001) and led to discovery of the two culture horizons: the lower (Epigravettian), and the upper (Magdalenian), with much more numerous artefacts, affected by slope processes and modern farming. The Epigravettian inventory included flake and blade cores. The blade cores were all of single-platform variety. Among relatively numerous retouched tools (13% of the whole assemblage) the majority represent specimens made on flakes or on massive blades. Among them the largest group are burins - more than a half of the entire tool assemblage. There was also a small quantity of endscrapers and backed bladelets. Unfortunately, with no direct radiocarbon dates, the inventory from Sowin 7, can be dated only very broadly to the late Pleniglacial.

During the research carried out at the multi-cultural site Targowisko 10 on the planned route of the A4 motorway in 2004 and 2005, an interesting lithic assemblage was discovered (Wilczyński 2009). The site represents a temporary camp of Epigravettian hunters with a clear spatial structure, which forms a visible living horizon, within concentrations of stone artefacts, horse and reindeer remains, and five hearths. The assemblage consists of more than a thousand and a half lithic artefacts (without chips and chunks) distinctly domestic in character, as proven by a large number of retouched tools and blades, much more numerous than flakes. The tool assemblage includes short, sometimes massive, endscrapers and backed blades, as well as numerous artefacts made from obsidian. Radiocarbon dates obtained from charcoal range between 14,520 - 14,820 years BP (with a single younger date of 13,720 years BP, probably the result of contamination of the sample), and indicate occupation during the pre-Bølling warm oscillation.

Magdalenian

The period 2006-2013 brought the discovery of two previously unknown Magdalenian open-air sites (Ćmielów-Gawroniec and Wierzawice 31) and fieldwork at Maszycka Cave, Klementowice and Sowin 7.

In 2005-2007 the team of Warsaw archaeologists carried out fieldwork at a newly discovered Magdalenian site Ćmielów-Gawroniec (Przeździecki *et al.*, 2012). This led to the discovery of the remains of a hunters' camp, complete with three dwelling structures. Next to a large lithic inventory there were also a few unique examples of portable art: small plaques with quite deep v-shaped grooves one of their faces. The only reliable piece of chronological evidence is stratigraphic position of dwellings nos. 1, 2 and 3a-c, which clearly indicates their relationship to an accumulation level of fossil soil, probably dating to Bølling (Przeździecki *et al.*, 2012).

In 2009 during a field survey S. Czopek discovered a new Magdalenian site Wierzawice 31, which was subsequently excavated in 2009-2010 (Bobak *et al.*, 2010). This fieldwork led to the discovery of the remains of a small Magdalenian hunters' camp, with numerous blanks and tools (microliths, burins) clustering within a limited area of around 8m². The remains of a hearth were also identified which yielded a single radiocarbon date of around 11,560 years BP placing the occupation episode at Wierzawice 31 in the period of the warm Allerød oscillation. Thus, this site, could be interpreted as a one of a few Central European sites evidence of Magdalenian occupations after Bølling interstadial (Bobak *et al.*, 2010).

The Magdalenian camp at Klementowice was first discovered in 1981 and, after a 25-year break, was revisited in 2007-2010 by reconnaissance fieldwork carried out under the supervision of T. Wiśniewski (Wiśniewski *et al.*, 2012). The result of investigation of the eastern area of the site (233 m²) was an inventory of 3000 flint artefacts, of which 300 are tools. The main lithic resource is erratic (Baltic) and Swieciechów-type flint. Cores include single-platform and two opposed-platform forms. Retouched tools are mostly perforators (also, characteristic Lacan and Langbohrer-type specimens), burins, and truncated pieces and account for nearly 90% of this group. At present Klementowice may be regarded as a medium-sized multi-seasonal hunters' camp, occupied during the end of cold and very dry Greenland Stadial 2a, antedating the sudden warming event of the Late Glacial Greenland Interstadial (GI 1e).

The site at Sowin 7 was excavated in 2011-13 yielding a large Magdalenian inventory of more than 4,000 artefacts, without chips (Wiśniewski *et al.*, 2012). The Magdalenian artefacts rested within the top layer of aeolian sands and modern soil. All cores in an advanced stage of reduction were blade forms – mostly of single-platform type. The largest group in the assemblage were flakes. The small number of retouched tools - only 1.5% - are mostly burins (also, a few of Lacan type), backed bladelets and retouched blades. The site yielded no radiocarbon dates but on the basis of techno-typological descriptions of its lithic inventory may be linked with assemblages dating from GS-2b-GI-1c (Wiśniewski *et al.*, 2012).

In 2013 a five-day archaeological survey was conducted on the terrace of Maszycka Cave (Bobak *et al.*, 2013b). The main aim of this fieldwork was to identify and explore the debris left after the investigation made by G. Ossowski in 1883. The 2013 excavation of an area of 2 m² helped secure 553 artefacts - mainly chips, small fragments of flakes and blades, bone remains along with some prehistoric and medieval pottery. As the authors suggest, most of the Stone Age artefacts may be connected to Magdalenian occupation.



References

- BOBAK D., ŁANCZONT M., NOWAK A., POŁTOWICZ-BOBAK M., TOKARCZYK S. (2010) – Wierzawice, st. 31 – nowy ślad osadnictwa magdaleńskiego w Polsce południowo-wschodniej. *Materiały i Sprawozdania Rzeszowskiego Ośrodka Archeologicznego* XXXI : 63-78.
- BOBAK D., PŁONKA T., POŁTOWICZ-BOBAK M., WIŚNIEWSKI A. (2013a) – New chronological data for Weichselian sites from Poland and their implications for Palaeolithic. *Quaternary International* 296 : 23-36.
- BOBAK D., KOZŁOWSKI S.K., TERBERGER T., POŁTOWICZ-BOBAK M. (2013b) – Wstępne sprawozdanie z badań archeologicznych na tarasie przed jaskinią Maszycką w 2013 roku. *Prądnik* 23 : 141-148.
- FURMANEK M., MOLENDĄ G., RAPIŃSKI A. (2001) – Wstępne wyniki badań na stanowisku schyłkowopaleolitycznym w Sowinie, pow. Niemodlin w roku 2000. *Śląskie Sprawozdania Archeologiczne* 43: 485-490.
- IRISH J.D., BRATLUND B., SCHILD R., KOLSTRUP E., KRÓLIK H., MAŃKA D., BORONÍ T. (2008) – A late Magdalenian perinatal human skeleton from Wilczyce, Poland. *Journal of Human Evolution* 55 : 736-40.
- JAROSIŃSKA U. (2006) – Aurignacian material from layer 4 at the Zwierzyniec I site (Chmielewski's excavation, trench ,76-78), In: Kozłowski S.K. (ed.), *Wylotne and Zwierzyniec. Paleolithic sites in southern Poland*, Warsaw, p. 349-360.
- KALICKI T., KOZŁOWSKI J.K., KRZEMIŃSKA A., SOBCZYK K., WOJTAŁ P. (2007) – The formation of mammoth bone accumulation at the Gravettian site Kraków–Spadzista B+B1. *Folia Quaternaria* 77 : 5-30.
- KOZŁOWSKI J.K. (2007) – Le Gravettien du nord des Carpathes et des Sudètes. *Paleo* 19 : 221-242.
- KOZŁOWSKI J.K. (2009) – Le concept de territoire au Paléolithique supérieur: la Pologne en périphérie septentrionale de l'oecumène. In: Djindjian F., Kozłowski J., Bicho N. (eds), *Le concept de territoires dans le Paléolithique supérieur européen*, p. 27-40.
- KOZŁOWSKI J.K. (2010) – The Middle to Upper Palaeolithic Transition North of the Continental Divide, In K.V. Boyle, C. Gamble, O. Bar-Yosef (eds.), *Between England and the Russian Plain The Upper Palaeolithic Revolution in global perspective*. Papers in honour of Sir Paul Mellars, Cambridge, p. 119-131.
- KOZŁOWSKI J.K., OTTE M. (2007) – L'origine du Solutrén, 40 ans après l'ouvrage de Ph. Smith, *Nouvelle parution : supplément n° 47 Le Solutrén. 40 ans après Smith '66*, p. 17-26.
- KOZŁOWSKI J.K., SOBCZYK K. (1987) – The Upper Paleolithic site Kraków - Spadzista street C2. Excavations 1980. *Prace Archeologiczne* 42 : 7 - 68.
- KOZŁOWSKI J.K., van VLIET B., KRAMARZ K., DROBNIEWICZ B., SACHSE-KOZŁOWSKA E., KUBIAK H. (1975) – Górnopaleolityczne stanowisko Kraków, ul. Spadzista C (badania w latach 1970 - 1973). *Folia Quaternaria* 45 : 43 – 71.
- KOZŁOWSKI L., KUŹNIAR W. (1914) – Paleolit w Jaksicach nad Wisłą. *Materiały antropologiczne – archeologiczne i etnograficzne* XIII : 1 – 9.
- MAŃKA D. (2006) – Kraków-Zwierzyniec I - open site of Jerzmanowician culture (Chmielewski's excavations 1976-1978, In: Kozłowski S.K. (ed.), *Wylotne and Zwierzyniec. Paleolithic sites in southern Poland*, Warsaw, p. 335-348.
- POŁTOWICZ-BOBAK M. (2012) – Observations on the late Magdalenian in Poland, *Quaternary International* 272-273 : 297-307.
- POŁTOWICZ-BOBAK M., BOBAK D., BADURA J. (2009) – Wyniki pierwszego sezonu badań na paleolitycznym stanowisku 11 w Lubotyniu na Płaskowyżu Głubczyckim, *Śląskie Sprawozdania Archeologiczne* 51 : 97-105.
- POŁTOWICZ-BOBAK M., BOBAK D., BADURA J., WACNIK A., CYWA K. (2009) – Nouvelles données sur le Szélétien en Pologne, In: P. Bodu, L. Chehmana, L. Klaric, L. Mevel, S. Soriano, N. Teyssandier (eds), *Le Paléolithique supérieur ancien de l'Europe du Nord-Ouest: Réflexions et synthèses à partir d'un projet collectif de recherche sur le centre et le sud du Bassin parisien - Actes du colloque de Sens (15-18 avril 2009)*, Société Préhistorique Française, p. 485-496.

- PRZEŹDZIECKI M., MIGAL W., KRAJCARZ M., PYŻEWICZ K. (2012) – Obozowisko kultury magdaleńskiej na stanowisku 95 „Mały Gawroniec” w Ćmielowie, pow. Ostrowiecki, woj. świętokrzyskie, Światowit”, Fascyкул B, *Archeologia pradziejowa i średniowieczna. Archeologia Polski VII (XLVIII)* : 104-115.
- SITLIVY V., ZIĘBA A., SOBCZYK K. (eds) (2007) - Middle and Early Upper Palaeolithic of the Krakow region. Piekary IIa, *Monographie de Préhistoire générale*, Brussels, pp. 218.
- STEFANŃSKI D. (2007) – Functional analysis of burins. *Folia Quaternaria* 77 : 97 – 116.
- SUDOŁ M., KRAJCARZ M.T., KRAJCARZ M. (2013) – Jaskinia Perspektywiczna - nowe stanowisko paleolityczne w dolinie Udorki (Wyżyna Częstochowska), *Materiały Sympozjum Speleologicznego* 47 : 75-76.
- VALDE-NOWAK P. (2013) – One more *Conus* shell from Oblazowa as stratigraphic indicator. In: P. Wojtal (ed), *Abstract & Guide Book: International Conference World of Gravettian Hunters*, Kraków, Poland, 25-28 June 2013, p. 92-93.
- VALDE-NOWAK P., NADACHOWSKI A. (2013) – Micoquian assemblage and environmental conditions for the Neanderthals in Obłazowa Cave, Western Carpathians, Poland, *Quaternary International*, <http://dx.doi.org/10.1016/j.quaint.2013.08.057>.
- WILCZYŃSKI J. (2006) – The Upper Paleolithic workshop at the site Piekary IIa sector XXII layer 5, *Sprawozdania Archeologiczne* 58 : 175-203.
- WILCZYŃSKI J. (2007) – The Gravettian and Epigravettian lithic assemblages from Kraków-Spadzista B+B1: dynamic approach to the technology. *Folia Quaternaria* 77 : 37-96.
- WILCZYŃSKI J. (2008) – Stanowisko Lubotyń pow. Głubczyce, *Silesia Antiqua* 44 : 274-276.
- WILCZYŃSKI J. (2009) – Targowisko – a new Late Glacial site in southern Poland, *Eurasian Prehistory* 6 : 95-118.
- WILCZYŃSKI J., WOJENKA M., WOJTAL P., SZCZEPANEK A., SOBIERAJ D. (2012) – Human occupation of the Borsuka Cave (southern Poland) – from Upper Palaeolithic to the Post Medieval Period, *Eurasian Prehistory* 9(1-2) : 73-87.
- WILCZYŃSKI J., WOJTAL P. (2011) – Jaksice II – a new Gravettian site in southern Poland, *Přehled výzkumů* 52 : 37-41.
- WILCZYŃSKI J., WOJTAL P., SOBCZYK K. (2012) – Spatial organization of the Gravettian mammoth hunters site – Kraków Spadzista (southern Poland), *Journal of Archaeological Science* 39 : 3627-3642.
- WILCZYŃSKI J., WOJTAL P., ŁANCZONT M., MROCZEK P., SOBIERAJ D., FEDOROWICZ S. (2014) – Loess, flints and bones: Multidisciplinary research at Jaksice II Gravettian site (southern Poland), *Quaternary International*, DOI: 10.1016/j.quaint.2014.04.002.
- WILCZYŃSKI J., SZCZEPANEK A., WOJTAL P., DIAKOWSKI M., WOJENKA M., SOBIERAJ D. (2014) – A Mid Upper Palaeolithic child burial from Borsuka Cave (southern Poland), *International Journal of Osteoarchaeology*, DOI: 10.1002/oa.2405.
- WIŚNIEWSKI A., FURMANEK M., BOROWSKI M., KĄDZIOLKA K., RAPIŃSKI A., WINNICKA K. (2012) – Lithic raw material and Late Palaeolithic strategies of mobility: a case study from Sowin 7, SW Poland, *Antropologie* 50/4 : 391-409.
- WIŚNIEWSKI T., MROCZEK P., RODZIK J., ZAGÓRSKI P., WILCZYŃSKI J., NÝVLTOVÁ FIŠÁKOVÁ, M. (2012) – On the periphery of the Magdalenian World. An open-air site in Klementowice (Lublin Upland, Eastern Poland), *Quaternary International* 272-273C : 308-321.